VOL. 11. No. 3. MARCH, 1948

THE N.Z.
POULTRY WORLD

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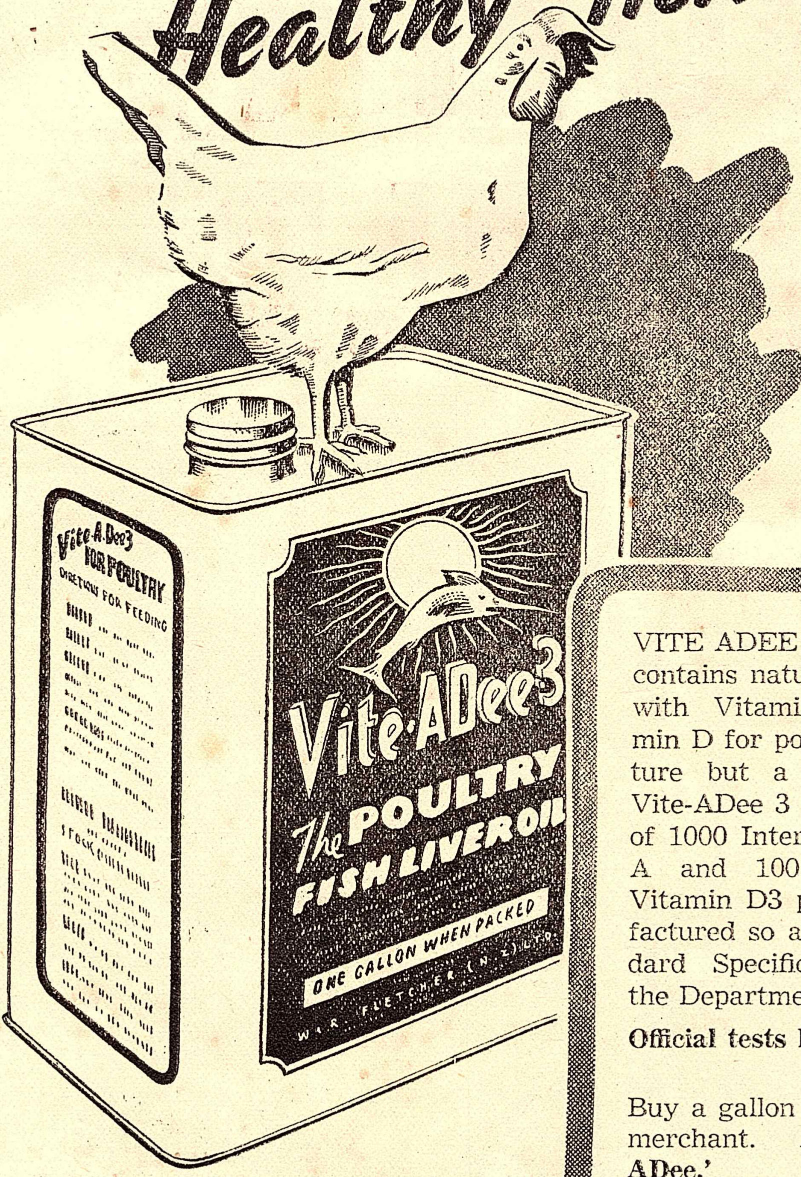

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The N.Z. POULTRY WORLD

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The Poultry Food Position For 1948

Owing to the world shortage of wheat and coarse grains, the method of allocation of export cereal surpluses through the International Emergency Food Council, shipping difficulties, and the small New Zealand cereal area this season, the supply of grain for poultry feeding may present certain difficulties during 1948. The Government is doing everything possible to secure adequate supplies from Australia; and it now appears that sufficient non-millable wheat may be secured to maintain the poultry industry properly. Until such supplies have been transported and stocks are available here there is a possibility that there may be some insecurity in supply, and in the meantime the fullest use should be made of the supplies of coarser grains available.

It is obvious that with the difficulties which may occur in providing feed, this is no time for any poultry farmer to increase the size of his flock or for new producers to enter the industry. In fact, until the position becomes clearer producers should be more than usually severe in their normal seasonal culling operations and only really good breeding hens and pullets shoud be retained in flocks.

EDWARD CULLEN,
Minister of Agriculture.

Address all Literary Correspondence to The Editor, P.O. Box 379, Wellington.

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Making the Best Use of Available Feed

The difficulties associated with maintaining supplies of poultry feed during 1948 are referred to in a statement to poultry producers by the Minister of Agriculture on the previous page. All possible has been done to assist the poultry industry, and this article sets out some ways in which poultry producers can help both themselves and the industry during any difficult period which may arise during 1948.

The general preference of poultry producers for wheat as a grain feed is based on a cost factor and on wheat's presumed greater feeding value than either barley or oats. Some poultrymen have developed a liking for feeding soaked wheat to the exclusion of the use of mash, but producers should now face the fact that such preferences must be shelved until the wheat supply position improves. The hard fact is that insufficient wheat is available this year for poultry producers to give wheat alone in their grain feed, and every endeavour should be made to obtain oats and barley to eke out supplies of wheat. No purpose would be served by suggesting definite proportions for a mixture of these grains, as supplies of each will vary from time to time.

Barley is an excellent feed for poultry and may be used without fear of adverse effects on laying or the health of the birds. Good plump oats are also good poultry feed, but the feeding value falls off sharply in light samples and where there is more fibre and less kernel. Here is a comparison of the food composition of average samples of these grains:—

	Protein	Oil	Carbohydrates	Fibre
	%	%	%	%
Wheat	12	2	69	2
Barley	9	2	68	5
Oats	10	5	58	10

Barley compares well with wheat, but oats have not the same feeding value as the other two grains. Nevertheless, oats must play a prominent part in the feeding of flocks until the food position improves.

Though during the past 12 months poultry producers have been requested not to resort solely to soaked wheat feeding, some have persisted in doing so. To continue that practice and to endeavour to obtain sufficient wheat at all costs to carry it out is a selfish policy which must reduce supplies of wheat to other poultry producers and so adversely affect their livelihoods.

Though it is not expected that many producers will attempt autumn hatching in present circumstances, the raising of pullets at this season of the year is tantamount to increasing a flock. Therefore poultry farmers should not autumn hatch this year.

Importance of Culling

Continuous culling of all classes of poultry stock is fundamental to successful management, but far too little culling is practised on the average poultry farm. Few, if any, producers will permit wastage of food either in the food store or at feeding time, but too many fail to realise that valuable food is being wasted daily when it is given to sick birds and those whose production is too low to show a reasonable return in eggs. Severe, efficient culling is of prime importance at present and may well be an important factor in preventing any need for reducing flocks by selling off sound, producing birds. To reduce a flock by drastic culling and feed the remainder with a full ration of grain and mash is far sounder policy than to retain a greater number of birds and give them reduced quantities of food.

Consider the following programme:—

Hens: As good laying pullets are the heaviest layers on the farm, they are the last birds to be sacrificed (with the exception of a nucleus of good breeders) should an acute shortage of food occur. Accordingly breeding stock should be selected—well up to the standard required under the Poultry Flock Improvement Plan—and all remaining hens discarded immediately they go out of production or earlier if the food situation enforces a reduction in stock.

Pullets: Inspect the pullets and discard any which show signs of weak constitution or undue coarseness. All weak-headed and undersized birds should go; they rarely show a profit in normal times and today they are wasting food. If rearing has been normal and the flock has received no serious setback, pullets which fail to come into proper production at the proper time should be treated with suspicion and culled unless they show early signs of coming into production.

Male birds: Though greater numbers of cockerels than will be wanted ultimately for the breeding pens must be retained to afford a reasonable selection when pens are made up, continuous and drastic culling of these birds is essential. When a cockerel exhibits some fault, including weakness of constitution, that bird should be on its way to the butcher as soon as practicable.

Continual culling on a daily basis throughout the farm calls for both persistence and patience and means making a special effort, but at no time has it been more important to cull birds effectively.

The "Backyarder"

Those who have only small units of birds can do much to help themselves and the general food situation by using household scraps to the fullest extent. Good household scraps, including meat, bread crusts, potatoes, and surplus cooked vegetables, may form at least 25 to 30 per cent. of the daily wet mash. A suitable receptacle should be put in a convenient place and these scraps collected.

If the majority of "backyarders" conscientiously used scraps, the demand for standard poultry mash would be reduced appreciably. That in turn would conserve grains which are now in short supply.

It is too early to predict how the feed position will affect the breeding programme for 1948. Much will depend on present negotiations with Australia and on the availability of transport both by rail in Australia and by ship to New Zealand.

—By F. C. Bobby, Superintendent of Poultry Husbandry.

Reprinted from "N.Z. Journal of Agriculture."

Dominion Conference 1948

POSTPONED UNTIL APRIL 28th AND 29th

Owing to apprehension on the part of several delegates in respect to the polio outbreak in Auckland and also the delay in obtaining implementation of the Post-War Marketing Plan, the N.Z. Poultry Board is postponing the Dominion Conference until April 28th and 29th.

Delegates with young families feel that the possible risk of infection will be considerably lessened by setting the date back another month; whilst the Board is loath to meet Conference without being able to table the Amended Marketing Plan. The considerable delay in obtaining the Government's approval for incorporating the report into amending regulations has been somewhat disturbing but pressure is being brought to bear to have the Post-War Marketing Plan released for conference.

Immediately the change of Conference dates was known, delegates were advised by telegram to enable a re-arrangement of plans and cancellations to be made. The postponement has no doubt been upsetting and inconvenient to many delegates; and is sincerely regretted, but under the circumstances, unavoidable.

N.Z. Poultry Board Election

In accordance with the Poultry Runs Registration Act, 1933, two members of the N.Z. Poultry Board will retire on 31st May, 1948.

The retiring members as chosen by lot represent the Wellington and Canterbury-Westland Provincial areas.

Nominations are therefore invited from all affiliated associations in these areas.

Nominations signed by nominee and endorsed by 20 registered poultry-keepers must be in the hands of the respective Secretaries on or before the 12th April, 1948.

Secretary, Wellington Provincial Assn. of Registered Poultry-keepers (Inc.), P.O. Box 18, Levin.

Secretary, Canterbury-Westland Registered Poultry-keepers' Assn. (Inc.), P.O. Box 208, Christchurch.

Further details will appear in the next issue of the N.Z. Poultry World.

N.Z. Poultry Board

REPORT OF FEBRUARY MEETING

Dominion Conference.—Owing to the delay in obtaining implementation of the Post-war Egg Marketing Plan and also concern expressed by delegates in respect to the "polio" outbreak in Auckland, the Dominion Conference was postponed until 27th and 28th April, 1948.

Conference remits were collated and grouped under respective headings for presentation to the Poultry Board Consultative Committee. All late information affecting the remits is being embodied in footnotes for guidance.

Wheat Levy.—Upon receipt of information that the Government had refused to allow a levy to be placed on wheat to augment the industry's funds, a request for an interview with the Minister was dispatched.

Post-War Marketing Plan.—Owing to the delay in releasing the amended plan, a similar request as above was forwarded, with the addition that a delegation be accorded a meeting with the Prime Minister if a satisfactory reason for the delay is not forthcoming.

Wheat Supplies.—Considerable discussion ensued in respect to future prospects for wheat supplies and methods of obtaining alternate grains.

Advice that the Acting Director-General, Department of Agriculture, and the Wheat and Flour Controller were at present in Australia precluded any immediate action, until the result of their negotiations is known.

Standard Mash.—A request for permission to allow a maximum of 5 per cent. peameal and 10 per cent. ryemeal in standard mash was forwarded to the Department of Agriculture. This step was deemed necessary owing to a shortage of mash ingredients in certain areas.

Board Election.—Various methods of election procedure proposed by the respective Provincial Associations were discussed, and referred to the Poultry Board Consultative Committee for incorporating in a report to be presented at the conference.

Maize Supplies.—Reports that the New Zealand maize crop had been over estimated by the Native Department and also as shelling had been much lighter this year, necessitated a decision to restrict whole grain sales and thus divert all supplies for inclusion in the standard mash.

Egg Price Increase.—Further efforts are being made to obtain consideration of the case presented by the Board for the full amount claimed in the original 1947 survey.

Marketing.—Several problems of a local nature such as dirty eggs, pulp manufacture, etc., were dealt with and referred to the respective local egg advisory committees.

Hutt Valley Registered Poultrykeepers' Assn.

ANNUAL GENERAL MEETING

The above association held its Annual General Meeting on Thursday evening, 12th February. Mr. E. J. B. Matthews presided over an attendance of 30 members. President's report and the balance sheet for year ending 31st December, 1947, were received and adopted as tabled. Subscriptions for 1948 have been increased from a general one of 7/6 to that of 10/- for owners of up to 200 birds, and 15/- for those of over 200 birds. The adoption of this new subscription rate was unanimous, many present expressing appreciation of what the Association had done for them over the past year. A strong Executive was elected to office for 1948 comparable with any other N.Z. Poultry Association. It is intended to extend the operations of the association which may necessitate a change of name. Mr. C. Bobby, who was present, spoke on the present wheat position and answered many questions and was thanked for his address. Officers elected were: President, Mr. E. J. B. Matthews; vice-president, Mr. S. D. Morris; hon. sec.-treasurer, Mr. A. J. Severn; committeemen, Messrs. J. Sinclair, J. A. Taylor, jun., F. Ecob, A. Salisbury, R. Hutson, P. Watson and F. Barr; delegate to W.P. Council, Mr. A. J. Severn; hon. auditor, Mr. F. J. Coman.

Wellington Holds a Field Day

A most successful field day was held on Saturday, the 14th. Feb., at the Poultry Demonstration Plant, Upper Hutt. Mr. F. C. Bobby, Superintendent of Poultry Husbandry, and Mr. J. C. Goldsmith, Wellington District Poultry Instructor, organised the gathering which was representative of the area covered by Mr. Goldsmith.

Masterton, Levin, Hutt Valley, Belgrove and Blenheim were represented by over 60 poultrymen and their wives. The Blenheim stalwarts, Messrs. Bright, Harris, Page, Bishell and Jones in their enthusiasm, chartered a plane for the day to ensure being present.

Mr. L. W. Jourdain, Manager of the Poultry Plant, had everything in great shape. The grounds and buildings were a model of tidiness, and there was no doubt about the efficiency of his staff. Mr. Jourdain insisted, however, that credit was due to Mr. Chambers for the work accomplished in the erection of additional poultry houses, etc., reclaimed from timber used at the old Wallaceville Plant. Mr. Chambers is now in partnership with Mr. T. S. Dove and is running the well-known "Wattledene" hatchery at Hornby.

Mr. Bobby on behalf of Mr. R. Tennent, Acting D/G. of Agriculture, extended a warm welcome to the gathering and introduced the staff and also two Poultry Pathologists from Wallaceville, Messrs. R. Salisbury and G. Osborne, both comparatively new arrivals from Australia.

Mr. Goldsmith in turn, introduced the Presidents and Secretaries of the respective Poultry Associations.

The forenoon was devoted to an inspection of the stock and plant, the assembly being split into two groups and conducted by Messrs. Bobby and Goldsmith respectively.

Explanations and comments were given in respect to the various equipment, housing, feeding, and stock. A delightful light luncheon was provided at the Brown Owl Tearooms, transport being arranged by bus.

Upon resuming after the luncheon adjournment, Mr. R. Salisbury gave a demonstration postmortem on a bird. His dexterity was amazing, the whole carcase being laid open and dissected in a matter of seconds. The various organs which would be affected by disease were displayed, and the identifying symptoms fully explained. A splendid specimen of Leucosis or big liver disease was shown. The exhibit was provided by the Wallaceville Laboratory. Mr. Salisbury said the complaint being a virus disease, could take several forms, such as enlarged liver, thickening in bony structure of the shanks, pearly eye with distorted pupils, and, of course, a paralysed condition of movement.

By injecting a compound from an infected liver into a healthy bird, any one of these forms of the complaint could be obtained. The actual cause of the disease is obscure and the only means of combating it is by good management and strict adherence to hygiene. New Zealand is fortunate in being comparatively free from serious diseases such as fowl-pest, Newcastle disease, Tick disease, or Laryngo tracheitis, which take take heavy toll of the poultry flocks in other counrties.

In Australia today, vaccination is an accepted expense to the poultry industry. Veterinary practitioners are handling 15,000 birds per day, charging 3d. per bird for this precautionary vaccination.

Mr. Salisbury also gave a demonstration in the use of an automatic doser which is being marketed in New Zealand today. With two good catchers, 300 birds an hour can be treated by injecting carbon-tetrachloride directly into the crop. Great care must be taken to prevent the carbon-tetrachloride from touching the windpipe or respiratory organs.

Poultry farmers were specially requested to forward live specimens of sick birds to Wallaceville for diagnosis or alternatively birds which had died from disease instead of killing affected birds to forward for examination. It was also asked that chickens be packed in dry sawdust to prevent leakage in transit.

Mr. Bobby gave an outline in respect to the future operations of the plant, dwelling at some length on the aspects of progeny testing which was being carried out. He answered many questions, particularly on the subject of poultry food supplies and also the proposed commercial activities of the plant. Furthermore, advice had just been received that a veterinarian was expected from England shortly who would work in the field with the poultry instructors.

In concluding, he thanked the gathering for their attendance and the keen attention displayed. The various presidents in return, spoke in appreciation of the field day and expressed a desire that the fixture should be made an annual event.

U.K. Compensates Poultrykeepers

The continued spread of "Fowl Pest" disease in England is causing ever-increasing anxiety and the Government in an endeavour to stamp out the disease is compensating poultry-keepers as an inducement to have outbreaks reported and affected birds destroyed.

It is reported that 2,000 outbreaks have occurred necessitating the destruction of 150,000 birds. Compensation amounting to £150,000 has already been paid out by the English Government, therefore it would appear that birds are valued at £1 each, rather a generous estimate under the circumstances; however, it may prove a wise move as poultry-keepers will not hesitate to report suspect outbreaks.

Holding Hatching Eggs

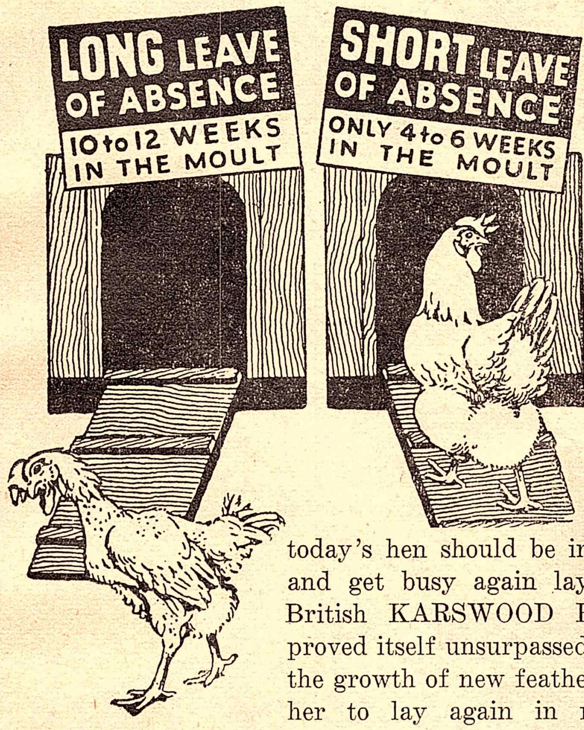
Many eggs collected for hatching have been ruined before they are packed by being allowed to get too cold in the poultry building. In cold weather many experienced breeders make a point of collecting the eggs four times a day and claim the hatchability is greatly increased thereby.

Contrary to generally accepted opinion eggs left in a nest all day where other hens are laying are not spoilt by pre-germination.

When storing hatching eggs prior to shipment to the hatchery do not place them in a cold basement. A temperature of from 50 to 60 deg. F. is about right as a holding level, and a room slightly too hot is still preferable to a too low temperature.

—"Canada Poultryman."

SHORTER HOLIDAYS FOR MOULTING HENS!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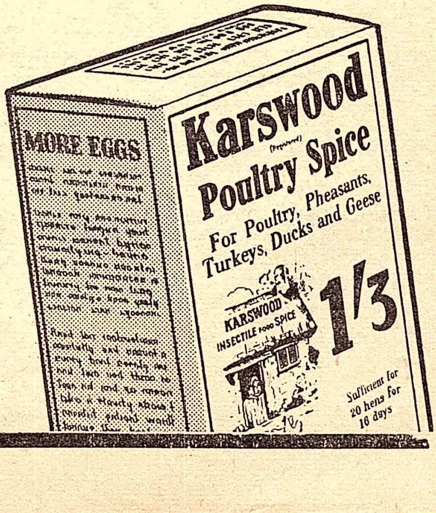
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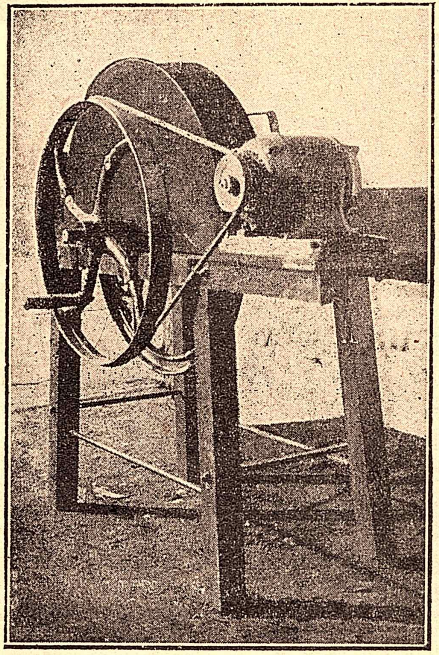

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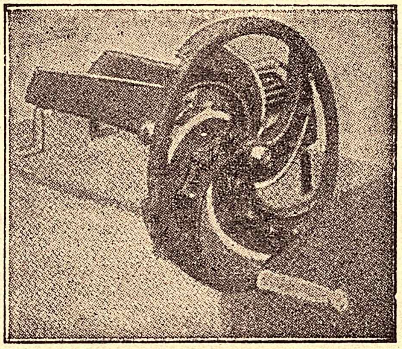

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48TH ANNUAL MEETING 1947

The Forty-eighth Annual Meeting was held in the United Friendly Societies' Hall, Invercargill, on Friday and Saturday, November 28th and 29th, 1947.

Mr. W. Cummings, the President, was in the chair.

The following delegates representing affiliated clubs were present: Messrs. R. J. Mitchell (Christchurch Poultry Club), C. Bartley (Dunedin Fanciers' Club), D. Double (Invercargill Poultry Club), E. Wheeler (North Canterbury Club), V. R. Green (Ashburton Fanciers' Club), C. Dempsey (Kaikorai-Waikari Poultry Club), J. Friend (Taieri Poultry Club), W. Keen (Milton Poultry Club), R. Drysdale (Gore Poultry Club), L. Soper (Nelson Poultry Association), A. E. Hore (Marlborough Poultry Association), H. E. Ball (Woolston Poultry Club), M. W. Hawkins (Leghorn and Minorca Club), A. N. McKie (N.Z. Heavy Breed Club), G. H. Nicoll (Canterbury Bantam Club), R. H. Johnstone (Canterbury O.E. Game Club), J. McFarlin (N.Z. O.E. Game Club), M. Ronald (Dunedin Utility Poultry Club), W. Cummings (South Island Canary Club), R. Pearce (United Pigeon Fanciers' Club), E. A. Wright (Society of Cage Birds), G. Lintott (Canterbury Flying Pigeon Club), G. D. Holloway (Canterbury A. and P. Association).

The chairman welcomed the delegates to the Conference, also representatives from the Department of Agriculture, Messrs. F. C. Bobby, L. C. Cocker, C. Goldsmith, and J. McGlinchy, Chairman of the New Zealand Poultry Board.

Mr. Bobby thanked the Chairman for being invited to the Conference and expressed his pleasure at being able to attend. Mr. J. McGlinchy, Chairman of the New Zealand Poultry Board, also thanked the Association for the invitation to attend. Messrs. L. C. Cocker and C. Goldsmith, Government Poultry Instructors, spoke on similar lines.

The minutes of the 1946 Annual Conference were read and confirmed.

Correspondence was received from the following: Mr. T. S. Dove (Canterbury Member of the N.Z. Poultry Board) wrote thanking the Association for the invitation to attend the Conference, but owing to a previous engagement he regretted being unable to attend.

The Secretary read that portion of the report of the North Island Poultry Association's 1947 Conference held on November 8th, at Wanganui, dealing with the standards for Utility Black Orpingtons and Australorps, when the following motion was carried by 17 votes to 8: "That this Conference is of considered opinion that the Australorp and Orpington are two different breeds. That they must be judged by two different standards and that Blue Australorps be also included."

The Problems Of Winter Feeding

The life of a poultry farmer is certainly not easy these days, and the winter months only serve to emphasize his problems.

The shortage of green food in winter adds to the problem, for green stuff, particularly lush silver beet and the native "Maori cabbage" or Rauraki, naturally slow down in growth during the cold wet months and both these greens are of special value as they contain valuable minerals and vitamins. The need to give the hens a course of Laymor Tonic regularly is of even greater importance at that time, and it should be added to the Standard Mash in the proportion of 3lb. Laymor Tonic to every 100lb. mash, thus ensuring that each bird gets its full supply of vitamins, minerals and the valuable tonic properties which Laymor contains.

The New Zealand Bantam and Breeders' Association application for affiliation, referred to the Conference by the Council, was read by the Secretary and the letter was held over for General Business.

The Secretary, B. Pearce, read a letter from himself, in which he tabled his resignation as Secretary and Treasurer, which matter was also held over until later in the meeting.

The Annual Report and Balance Sheet was read by the Secretary.

In submitting the Forty-eighth Annual Report and Balance Sheet for the year ending October 31st, 1947, your Council is able to record a very satisfactory year. Twenty-five societies are affiliated to the Association: 13 of that number held public shows. Reports from the 12 clubs which held winter shows were very encouraging, entries being up in most of them, and support given was above the average.

The Gore Club held its first show since the war started, and the fixture was a great success. Also the new club affiliated last Conference, namely Milton Utility Poultry and Fanciers' Club, held its first exhibition at the end of May, the results being more than expected and promises well for their 1948 shows. The only public summer show held was one by the Woolston Poultry Club at the end of March, in the Christchurch Poultry Club's show building, and some exceptional young birds were staged.

South Island Championships to the total of 95 were allotted to the 1947 shows and in 19 no entries were received. This lack of supported was divided between the show sections as follows: Standard Poultry 6, Utility Poultry 3, Ducks 1, Bantams 1, Pigeons 4, Canaries 2, Cage Birds 2; total, 19. Champion certificates were awarded in all 77 for which entries were received, and in 24 full quorums were benched, which entiled the winner to £1/1/- prize money in addition to the certificate. The demand for the New Zealand Championships at the Nelson Conference last November was a record, as all the 85 offered were purchased by clubs, the previous largest number purchased being 69.

These championships are a valuable asset both to clubs and the association, and a request from the North Island Poultry Association to be allotted New Zealand championships for their shows, which will come before the

Conference in Invercargill, will require careful consideration.

All varieties of breeds in Poultry, Pigeons and Cage Birds are allotted New Zealand championships, the cost of each certificate to clubs being 10/-.

At the 1943 Conference the following was carried: "New Zealand Championships to be drawn by ballot, and as each championship is drawn, if more than one club applies for it, such championships to be decided by ballot between them." Clubs are advised to give their delegates power to participate in further ballots for championships if they are unsuccessful in their first ballot.

The Victory Shield was competed for at the Ashburton Fanciers' show and was won by Mr. G. H. Nicoll, who scored 8¾ points in the Utility Black Orpington Cockerel class.

Show Standards: The committee appointed in Nelson at the 1946 Conference to draw up a Standard for Old English Game Fowls and Old English Game Bantams, had several meetings and finally compiled a Standard, which was in use during the past show season. The Standard compiled is a credit to the members of that committee, and the thanks of the Association is due to them for their work, especially to Mr. C. Stone, of Nelson, who travelled to Christchurch for the final meeting. The first issue of the Standard was nearly all sold by the first week in June, therefore your Council ordered a second issue of 100 copies, which appear in your balance sheet as an asset.

Obituary: With sincere regret your Council records the death in May, of Mr. J. D. Gobbe, after a short illness. Mr. Gobbe was known to most fanciers and clubs throughout both Islands, both as an exhibitor and judge. Mr. Gobbe was a past president of the Association and sat as a councillor for a long run of years. To his wife and family your council extends its sympathy on behalf of the Association.

Utility Poultry Standard: Two meetings of the revision committee appointed to draw up a Utility Poultry Standard will have been held before the Invercargill Conference, and a review of the work done will be submitted to your delegates, Messrs. Cummings, Bartley and Mitchell at the Conference. Mr. R. J. Mitchell was appointed to the committee in place of the late Mr. J. D. Gobbe.

The question of a separate standard for Utility Black Orpingtons and Australorps has been held over until after our Conference.

The Association at the Nelson meeting passed a strong resolution that we request a standard for both. The question has been mentioned that there be only one standard for both. Your Council draws the attention of all clubs to this question with the earnest request that they instruct their delegates how to vote when it comes before the meeting in Invercargill. Another important point regarding the Utility Standard is the cost of producing the standard. At the Nelson meeting, when we were invited by the Department of Agriculture to appoint three delegates in the revision committee, we were informed that the cost would be nil. Since the committee has met, the joint delegates have agreed that some portion of the expense should be met by all who are to benefit by the

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standrd. The South Island Poultry Association share has been suggested at £40, but our delegates on the committee could not commit themselves to that amount, and it has been referred to the conference for consideration by your Council. Your Council suggests that if the £40 is agreed to, some levy should be made on clubs towards the cost. This is a question for the Conference to decide.

New Affiliation: Your Council recently received an application for affiliation to the Association by a new club called the New Zealand Bantam and Breeders' Association. A full list of its officers was tabled with the application. As the season's shows were over, the Council decided to refer the application to the Annual Meeting in Invercargill.

Balance Sheet: The annual account made up to October 31st, 1947, shows receipts to be £258 9/11 and the payments £94/14/11, which leaves a credit balance of £163/15/-. This year the General Account profits by the receipts from New Zealand championships, and stands at £81, against £58/8/5 last year. The Sinking Fund to provide the cost of new champion certificates, is £82/15/-, and during the coming year a new issue of the South Island certificates will require to be printed, the cost of such to be met by this fund. The liabilities are nil and the assets £314/15/-.

The postal ballot to elect the 1948 Executive had resulted in the following selection:—

Patron: Hon. E. Cullen, Minister of Agriculture.

President: Mr. R. J. Mitchell.

Vice - Presidents: Messrs. M. Ronald (Dunedin), D. Double (Invercargill), S. P. Taylor (Ashburton), E. Wheeler (North Canterbury), J. Meikle (Oamaru), E. W. Gilder (Gore), C. T. Marshall, (Nelson), A. S. Waldie (Taieri), R. S. Wadsworth (Blenheim), C. Dempsey (Kaikorai), W. B. McKenzie (Wellington), W. Keen (Milton).

Councillors: C. L. Burt (Standard Poultry), A. N. McKie (Utility Poultry), H. A. Pearson (Bantams), F. Ashworth (Ducks), C. A. Gallop (Fancy Pigeons), F. Kingsford (Working Homer Pigeons), G. Lintott (Canaries), J. W. Cottier (Budgerigars), E. A. Wright (Cage Birds other than Canaries or Budgerigars).

The Chairman declared the Conference open for General Business and the Secretary drew the attention of delegates to the fact that the Association had no control other Judges to judge championships, and he moved that the following words be placed over the new Judges' List to be compiled before the 1948 show season: "To qualify to judge a championship at South Island shows, a Judge's name must appear on the approved List of Judges issued by the Assocation." The suggestion was agreed to by the Conference.

The application from the newly formed Bantam and Breeders' Association for affiliation was granted.

Mr. C. Bartley (Dunedin Fanciers' Club) stated that this year was the centennial year of Otago, and his club was making efforts to stage a show suitable to the occasion, and he applied for nine South Island Championship Certificates, one for each section of the show, as Centennial Championships. The Conference granted the request.

Mr. W. Cummings, one of the Association's delegates on the Utility Poultry Standard Revision Committee, advised the Conference that he desired to retire from the position as, seeing the majority of clubs had voted against him for President, they appeared to have no confidence in him as one of the Committee. A number of delegates spoke in favour of Mr. Cummings withdrawing his resignation, and the following motion was moved: "That the Conference has every confidence in their delegates on the Utility Standard Revision Committee." The motion was carried unanimously and Mr. Cummings withdrew his resignation and will see the work through to a finish.

Mr. G. H. Nicoll, of Ashburton, was empowered to provide a Plate for Utility Orpingtons for the Council to forward with its delegates to the next meeting of the Revision Committee of the Utility Standard, and the Council was left to select a Plate for Australorps.

It was decided that the Government Poultry Instructor for Canterbury be appointed a representative of the Department of Agriculture on the Council of the Association.

The resignation of the Secretary and Treasurer (R. Pearce), after holding office for 25 years, was accepted with regret, and the Conference expressed its sincere appreciation of his services while in office.

A vote of thanks was passed to the retiring officers, Messrs. W. Cummings (late President), G. King (Bantam Councillor), J. Jeffreys (Budgerigar Councillor) and E. McCreanor (Cage Bird Councillor). The retiring Secretary offered to prepare the Conference Report for the new Executive, and he was empowered to take charge of the Association's books until he had prepared a list of the Association's property to pass over to the new Executive.

The Conference closed at 5.30 p.m. on the Saturday afternoon, and the President moved a vote of thanks to the Invercargill Club for so ably entertaining the delegates to the Conference.

REMITS PASSED

"That the Association revise the Judges' List before the 1948 show season."

"That no novice exhibitor be allowed to judge at shows."

"It was decided to hold the 1948 Conference in Dunedin."

"That no part of a Budgerigar perch be painted."

"That all Specialists' Clubs affiliated to the Association shall pay an annual subscription of 10/6, which shall entitle it to vote on all matters except show dates at all meetings of the Association, etc."

"That each club appoint a junior member to act in conjunction with judges at their shows, to receive instructions from him on judging points, and to judge a class under the judge's supervision."

This remit was passed as a recommendation from the Association that clubs appoint Assistant Judges at their shows.

"That Championships be confined to one breed only in all classes of Ducks."

"That the drawing of championships at the Conference be done by marbles instead of by tickets as in the past."

"That Clubs holding their 30th Golden Jubilee Shows, be granted three New Zealand Championships of their own choice at the usual fee."

Victory Challenge Winner, 1947 —G. H. Nicoll (at Ashburton).

Show dates for 1948 shows were allotted as follows:—Christchurch Poultry Club—Thursday, Friday and Saturday, June 3rd, 4th and 5th.

Dunedin Fanciers' Club—Monday, Tuesday and Wednesday, June 7, 8 and 9.

Invercargill Poultry Club—Thursday, Friday and Saturday, June 24, 25 and 26.

North Canterbury Poultry Club—Friday and Saturday, July 2 and 3.

Ashburton Fanciers' Club—Friday and Saturday, June 18 and 19.

Oamaru Poultry Club—Friday and Saturday, July 9 and 10.

Taieri Poultry Club—Friday and Saturday, June 18 and 19.

Gore Poultry Club—Friday and Saturday, July 9 and 10.

Milton Utility Poultry and Fanciers' Club—Friday and Saturday, May 28 and 29.

Nelson Poultry Association—Friday and Saturday, June 25 and 26.

Marlborough Poultry Association—Friday and Saturday, July 9 and 10.

Kaikorai-Waikari Club—Friday and Saturday, May 21 and 22.

It was decided to grant two South Island Championships and two New Zealand Championships to Border Canaries, one each for Yellow and Buff.

The Budgerigar Championships were altered to read Opaline Green Series, Opaline Blue Series.

The following is the list of South Island Poultry, Pigeon and Cage Bird Championships drawn by clubs for their 1948 shows:—

Note.—Unless otherwise mentioned, all Norwich Canaries are Plain Head.

Christchurch Poultry Club

Silkie Fowl, Standard Classes; Buff or Cinnamon Orpington, Standard Class; Utility White Wyandotte; Utility Barred Plymouth Rock; Old English Game Bantam, Spangle Male; Any other Variety Fancy Pigeon; Homer Hen, Flown 275 miles or over; Yorkshire Yellow Canary; Flighted Class, C.T.V.; Norwich Canary, Cinnamon or Green, Flighted Class; Cinnamon Budgerigar, Open Class; Opaline Budgerigar, Blue Series, Open Class.

Dunedin Fanciers' Club

Black Leghorn, Standard Class; Silver Wyandotte, Standard Class; Utility White Plymouth Rock; Utility Sussex; Black Pekin Bantam; Nun Pigeon; Homer, Most Likely Flier, Old or Young Bird; Yorkshire Canary, Cinnamon or Green, Flighted Class; Roller Canary, Open Class; Yellow Budgerigar, Open Class; Blue, Cobalt or Mauve Budgerigar, Open Class.

Invercargill Poultry Club

English White Leghorn, Standard Class; Rhode Island Red, Standard Class; Any Other Variety, Standard Poultry; Utility Ancona; Utility Any Other Variety Poultry; Old English Game Bantam, Partridge or Wheaten Female; Old English Game Bantam, Spangle Female; Baldhead Tumbler Pigeon, C.L.; White Fantail Pigeon; Yellow Border Canary, Open Class; Foreign Bird, Soft Bill.

North Canterbury Poultry Club

Langshan, Standard Class; White Plymouth Rock, Standard Class; Old English Game Bantam, Any Other Colour; Utility Rhode Island Red; Wyandotte Bantam; Frill Pigeon; Norwich Yellow Canary, Unflighted Class, C.T.V.; Pink Eye Budgerigar, Open Class.

Ashburton Fanciers' Club

Ancona, Standard Class; Utility Black Leghorn; Utility Pekin, Drake or Duck; Old English Game Bantam, Duckwing Female; Buff Border Canary, Open Class; Tumbler Pigeon, Self Other than Black, C.L.; Green or Olive Budgerigar, Open Class; Greywing Budgerigar, Any Suffusion, Open Class.

Oamaru Poultry Club

Barred Plymouth Rock, Standard Class; Utility Black Orpington; Pekin Bantam, Other Than Black; Black Tumbler Pigeon, C.L., L.F.; Pouter or Pigmy Pouter Pigeon; Buff Norwich Canary, Flighted Class, C.T.V.; Buff Yorkshire Canary, Flighted Class, C.T.V.; Budgerigar, Any Colour, Closed Ring, Current Season.

Kaikorai-Waikari Poultry Club

Black Orpington, Standard Class; Utility Minorca; Utility Langshan; Old English Game Bantam, Black, Red or Light Red, Male; Best Coloured Homer in Colour Classes; Norwich Yellow Canary, Flighted Class, C.T.V.; Yellow Budgerigar, Any Suffusion, Open Class; Any Other Colour Budgerigar, Open Class.

Taieri Poultry Club

Minorca, Standard Class; Utility White Leghorn; Utility Brown Leghorn; Black Rosecomb Bantam; Cropper Pigeon; Yorkshire Yellow Canary, Unflighted Class, C.T.V.; British Bird, Hard Bill.

Milton Poultry Club

Any Variety, Drake or Duck, Standard Class; Utility Silver Wyandotte; Utility Khaki Campbell, Drake or Duck; Any Other Variety Bantam; Fantail Pigeon, Other Than White; Yorkshire Canary, Any Other Colour, Flighted or Unflighted Classes; Foreign Bird, Hard Bill.

Gore Poultry Club

Old English Game; White Wyandotte, Standard Class; Old English Game Bantam, Duckwing, male; Jacobin Pigeon; Homer Cock, Ringed 1947, Flown Class; Tumbler Pigeon, Any Other Colour; Buff Norwich Canary, Unflighted Class, C.T.V.; Opaline

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Budgerigar, Green Series, Open Class.

Nelson Poultry Association

Sussex, Standard Class; Utility Buff or Cinnamon Orpington; Modern Game Bantam; Modena Pigeon; Homer Cock, Flown 275 Miles or Over; Norwich Canary, Any Other Colour, Flighted or Unflighted Classes; Whitewing Budgerigar, Any Suffusion, Open Class.

Marlborough Poultry Association

Brown Leghorn, Standard Class; Hamburg, Standard Class; Utility Australorp; Utility Indian Runner, Drake or Duck; Homer Hen, Ringed 1947, Flown Class; Buff Yorkshire Canary, Unflighted Class, C.T.V.; Mule Canary; British Bird, Soft Bill.

Victory Shield Competition, 1948

Milton Poultry Club.

New Zealand Poultry Board Trophy.

Best Utility White Leghorn.

Gore Poultry Club.

Junior Bantam Championships, Certificates only. Best Light Breed Male, Ashburton. Best Light Breed Female, North Canterbury. Best Heavy Breed Male, Christchurch. Best Heavy Breed Female, Christchurch.

New Zealand Championships

Applications for New Zealand Championships exceed the demand of last year at Nelson. All championships, to the number of 93, were purchased, the average ballot for most of them being between 10 to 12 clubs.

Before the ballot the North Canterbury Club, taking the opportunity offered by remit 24, passed at the Conference, claimed the Utility White Leghorn, Black Rosecomb Bantam and Norwich Buff Canary, Unflighted Class, C.T. or V.

The following was the result of the ballot from applications for New Zealand Championships.

Note.—All Norwich Canary Championships are Plain Head unless otherwise mentioned.

Christchurch Poultry Club

Plymouth Rock, Standard Class; Brown Leghorn, Standard Class; Langshan, Standard Class; Utility Langshan; Utility Plymouth Rock; Utility Black Leghorn; Utility Indian Runner, Drake or Duck; Nun or Jacobin Pigeon; Pouter or Cropper Pigeon; Frill Pigeon; Buff Yorkshire Canary, Unflighted Class, C.T.V.; Any Other Colour Norwich Canary, Flighted or Unflighted Classes; Yellow Wing Budgerigar, Any Suffusion, Open Class.

Dunedin Fanciers' Club

Sussex, Standard Class; English White Leghorn, Standard Class; Flying Homer Hen, Flown 275 Miles or Over; Self Tumbler Pigeon, Other Than Black, C.L.L.F.; Flying Homer Hen, Ringed 1947, Flown Classes; Baldhead Tumbler Pigeon, C.L.; Coloured Homer in Colour Classes, Old Bird; Buff Border Canary, Open Class; Buff Yorkshire Canary, Flighted Class, C.T.V.; Opaline Budgerigar, Green Series, Open Class; Any Other Colour Budgerigar, Open Class; Yellow Budgerigar, Open Class; Foreign Bird, Soft Bill.

Invercargill Poultry Club

Minorca, Standard Class; Utility Brown Leghorn; Black Tumbler, C.L.L.F.; Cinnamon or Green Norwich Canary, Unflighted Class; Roller Canary; Cinnamon or Green Norwich Canary, Flighted Class.

North Canterbury Poultry Club

Hamburg, Standard Class; Drake or Duck, Any Variety, Standard Class; Utility Sussex; Utility Minorca; Utility Pekin, Drake or Duck; Utility White Leghorn; Black Rosecomb Bantam; Old English Game Bantam; Fantail Pigeon; Yellow Border Canary; Mule Canary; Norwich Buff Canary, Unflighted Class, C.T.V.; Blue, Cobalt or Mauve Budgerigar, Open Class; Budgerigar, Any Colour, Close Ring, Current Year.

Ashburton Fanciers' Club

Ancona, Standard Class; Modern Game Bantam; Pekin Bantam, Other than Black; Buff Norwich Canary, Unflighted Class, C.T.V.; Cinnamon Budgerigar, Open Class.

Kaikorai-Waikari Poultry Club

Black Orpington, Standard Class; Utility Australorp; Utility Wyandotte; Black Pekin Bantam; Yellow Yorkshire Canary, Flighted Class, C.T.V.; Yorkshire Canary, Any Other Colour, Flighted or Unflighted Classes, C.T.V.; Yellow Yorkshire Canary, Unflighted Class, C.T.V.

Taieri Poultry Club

Wyandotte, Standard Class; Utility Black Orpington; Utility Buff or Cinnamon Orpington; Any Other Variety Bantam; Flying Homer, Cock, Flown 275 Miles or Over; Yellow Norwich Canary, Flighted Class, C.T.V.; British Bird, Hard Bill.

Milton Poultry Club

Dragoon Pigeon; Cinnamon or Green Yorkshire Canary, Unflighted Class; British Bird, Soft Bill; Pink Eye Budgerigar, Open Class.

Gore Poultry Club

Silkie Fowl, Standard Class; Rhode Island Red, Standard Class; Utility Khaki Campbell, Drake or Duck; Coloured Homer in Colour Classes, Ringed 1947; Yellow Norwich Canary, Unflighted Class, C.T.V.; Cinnamon or Green Yorkshire Canary, Flighted Class; Opaline Budgerigar, Blue Series, Open Class; Green or Olive Budgerigar, Open Class; Greywing Budgerigar, Any Suffusion, Open Class.

Nelson Poultry Association

Old English Game; Utility Ancona; Wyandotte Bantam; Flying Homer, Cock, Ringed 1947, Flown Classes; Modena Pigeon, White-

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Marlborough Poultry Association

Black Leghorn, Standard Class: Buff or Cinnamon Orpington, Standard Class; Utility Rhode Island Red; Tumbler Pigeon Other Than a Self Colour or Baldhead; Magpie Pigeon.

LIST OF SECRETARIES

The following is a list of Affiliated Clubs' Secretaries and addresses:—

Christchurch Poultry Club: H. E. Ball, P.O. Box 159, Christchurch.

Dunedin Fanciers' Club: W. G. Wall, 48 Douglas Street, St. Kilda, Dunedin.

Invercargill Poultry Club: J. E. Clent, 118 Isabella Street, Invercargill.

Ashburton Fanciers' Club: O. Spicer, 158 Willis Street, Ashburton.

North Canterbury Poultry Club: H. E. Ball, 14 Tabar Street, Opawa, Christchurch.

Oamaru Poutry Club: J. Meikle, 71 Aln Street, Oamaru.

Taieri Poultry Club: W. R. Cunningham, 196 Gordon Road, Mosgiel.

Gore Poultry Club: J. Law, 24 Trafford Street, Gore.

Kaikorai-Waikari Poultry Club: M. Shepherd, 16 Jellicoe Street, Roslyn, Dunedin.

Milton Poultry and Fanciers' Club: A. W. Paul, Eden Street, Milton.

Nelson Poultry Association: F. E. Lehndorf, Rui Street, Tahunanui, Nelson.

Marlborough Poultry Association: B. E. Patchett, 6 Keus Street, Blenheim.

Canterbury Old English Game Fowl Club: F. Williams, 11 Lytton Street, Christchurch.

New Zealand Old English Game Fowl Club: R. G. Frew, 43 Somerfield Street, Christchurch.

New Zealand Heavy Breed Club: A. N. McKie, 72 Barbour Street, Christchurch.

Leghorn and Minorca Club: C. Sanderson, 77 Wrights Road, Christchurch.

United Pigeon Fanciers' Club: C. A. Gallop, 10 Antrim Street, Christchurch.

Canterbury Bantam Club: H. A. Pearson, 34 Southey Street, Christchurch.

New Zealand Bantam and Breeders' Association: A. C. Lee, 34 Bishopsworth Street, Opawa, Christchurch.

Canterbury Flying Pigeon Club: F. L. Brownie, 265 Pages Road, Christchurch.

South Island Canary Club: F. S. Campbell, 31 Allen Street, Christchurch.

Society of Cage Birds: A. McKenzie, 62 Elizabeth Street, Riccarton, Christchurch.

Woolston Poultry Club: N. G. Harrington, 71 Somerfield Street, Christchurch.

Canterbury A. and P. Association: M. E. Lyons, P.O. Bx 296, Christchurch.

Blenheim Flying Pigeon Club: W. Longman, Dillon Point Road, Blenheim.

Dunedin Utility Poultry Club: J. McConnachie, Opoho Road, The Gardens, Dunedin.

North Island Poultry, Pigeon, and Canary Association: D. Wilson, 804 Ellison Road, Hastings.

South Island Poultry Association: President's Address: R. J. Mitchell, 163 Tancred Street, Linwood, Christchurch.

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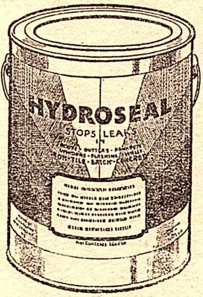

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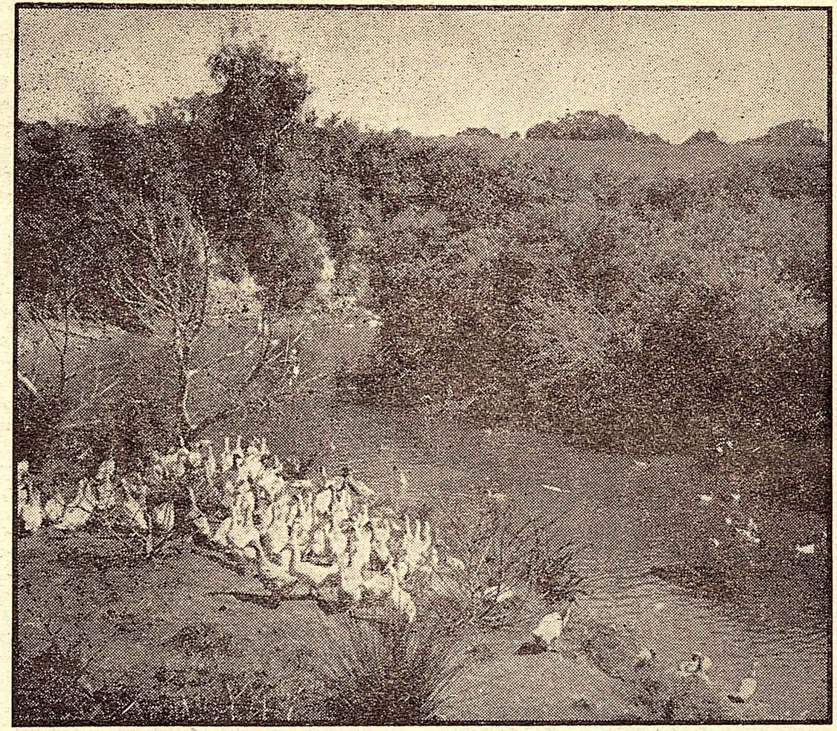
Raising Ducks as Layers and Table Birds

By F. C. BOBBY, Superintendent of Poultry Husbandry, Wellington

A general summary of practical duck raising is to be the subject of articles in the "Journal" over the next few months, but not with the intention of encouraging any increase in the duck flocks of New Zealand. This is not because of the present shortage of poultry foods, but because the consumption rate of duck eggs in New Zealand is limited, even in times of acute egg shortages, as at present, and any sudden and appreciable expansion in flocks of ducks would result in marketing difficulties during the egg "flush" season in the spring and early summer.



Prices returned for duck eggs tend to be slightly lower than those for hen eggs, and any rapid increase in supplies would probably result in even lower returns to duck farmers. This does not mean that there is no place for duck egg production in the economy of the poultry industry, but rather that care must be taken not to increase duck flocks until the consumption rate of duck eggs increases. Thus any appreciable expansion in duck raising at present might easily lead to an adverse reaction upon established duck farmers with flocks on a commercial scale.

The following figures show the numbers of ducks and poultry in New Zealand in 1945:—

	Poultry	Ducks
North Island	2,516,305	252,790
South Island	1,554,368	67,128
Dominion totals	4,070,673	319,918

These figures refer to both sexes. The greater proportion of ducks is in the North Island, and the greatest concentration of these flocks is around Auckland, where there are large commercial farms.

The limited demand for duck eggs is caused largely by public prejudice against them, which is not confined to New Zealand, but was evident in Great Britain before the war. It is unfortunate that duck eggs cannot be preserved by the housewife as satisfactorily as hen eggs, and that up to the present duck egg pulp has not been readily accepted by pastry cooks and others using egg pulp for manufacturing. There seems little reason for the prejudice against duck egg pulp, and in the future it may largely disappear.

Public alarm after an occasional reported case of illness after eating duck eggs has not assisted the position, though there is no danger in eating duck eggs which have been properly cooked, whether by boiling, frying, or poaching, or when included in any food mixture which is subsequently cooked in the ordinary way. Trouble has been experienced only in a very limited number of cases, and then only when duck eggs have been eaten in a raw or semi-raw state, as in the case of Spanish cream made with duck eggs. The trouble which has occurred should therefore be understood and kept strictly in perspective, since any possible recurrence can be avoided so easily.

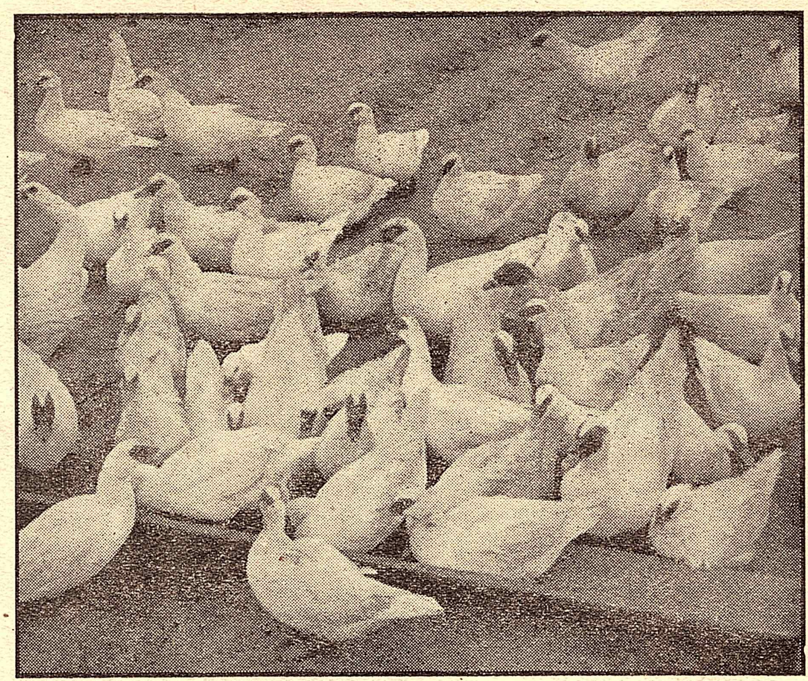
DUCK RAISING

Ducks, like poultry, are raised either for egg production or table duck production. The rearing and management of ducks for both purposes are similar in a number of respects.

The best results with laying ducks are generally obtained where the birds have ample ground, and particularly where free range is possible. Ducks cannot therefore be generally recommended for small poultry keepers with strictly-limited areas of ground, though ducks raised for table purposes require to be kept on smaller areas during the fattening period.

A creek or running water is not essential for laying ducks, but is of some advantage for breeding ducks, though it is still not essential. Ducks do well running over grass paddocks or in an orchard, but a well-drained soil should be selected where possible. Ducks should not be run in confined spaces on heavy soils. Though laying ducks on free range and with access to a creek may pick up some food of value, the feeding of adequate quantities of mash and grain is essential if high egg production is to be obtained and maintained.

The capital outlay for the establishment of a duck farm on a commercial scale is appreciably lower than for a poultry farm of equal size.



Muscovy ducks are a dual-purpose breed, the ducks laying well and the drakes being used extensively for table purposes.

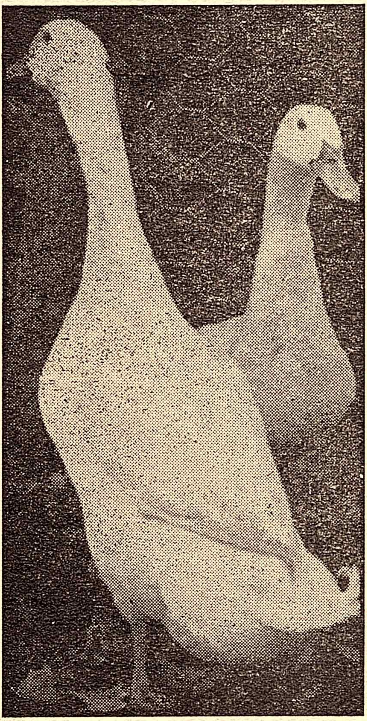
BREEDS OF DUCKS

Breeds of ducks most commonly met with in New Zealand are Khaki Campbell, Fawn and White Runner, Pekin, and Muscovy. Those requiring greater details of breeds than are given here may refer to the New Zealand Utility Poultry Standards or accepted standard text-books on the subject.

Khaki Campbell. This by far the most popular egg-producing breed, and as the quality and flavour of the flesh are good, surplus drakes and culls may be used for table purposes. The Khaki Campbell has been developed as a high-producing laying duck, and flock averages of 200 or more eggs per bird per annum are not uncommon where a good strain of this breed is kept and management is efficient. Ducks of this breed lay a white egg. The general colour of the duck is khaki, and the drake is bronze or bronze-green in the head, neck, and stern. The minimum weights laid down for this breed in the New Zealand Utility Poultry Standards are:—

Ducks under 12 months	5lb.
Ducks over 12 months	6lb.
Drakes under 12 months	6lb.
Drakes over 12 months	7lb.

These may see high weights for heavy laying strains, but recent experience under the New Zealand Poultry Flock Improvement Plan indicates that they are easily attained among flocks of good Khaki Campbells.



The Pekin duck is primarily a table bird, but will lay well.

Fawn and White Runner. The Runner breed of ducks are essentially egg-producers, being of a much lighter build than Khaki Campbells. Runner ducks are not suitable as table birds, and accordingly have not the same general utility value. Runner ducks are excellent layers and until the development of the Khaki Campbell were unrivalled in this respect. Today Runners in any variety are not as popular as the Khaki Campbell. They lay a green or greenish-white egg. The minimum standard weights for the breed are as follows:—

Ducks under 12 months	3lb
Ducks over 12 months	4lb
Drakes under 12 months	3½lb
Drakes over 12 months	5lb

Pekin. The Pekin, primarily a table duck, matures quickly and carries a good quantity and quality of breast meat. It will, however, lay well, particularly in strains which have been developed for egg production, but it cannot be compared with the Khaki Campbell for egg production. The plumage of both sexes is cream and the bill yellow. Good drakes attain 8lb. or over and ducks a pound less.

Muscovy. This breed may well be termed a dual-purpose breed, as Muscovy ducks lay moderately well and drakes are used extensively in this country for table purposes. Unlike other domesticated ducks, birds of the Muscovy breed are able to fly easily. The drake is considerably larger than the duck, there being a greater difference in this respect than in other breeds of ducks. There are two varieties of this breed, the coloured and the white.

HOUSING DUCKS

The amount of protection afforded to laying ducks depends to a large extent on the part of New Zealand in which they are kept. It is not uncommon in northern districts for no housing at all to be provided for flocks of laying ducks, which are retained in a closed grass pen at night and sit about in the grass all night during both summer and winter. In districts where hard frosts and snow may be expected it is preferable to give ducks protection at night during the winter in a simple, open-fronted, lean-to type of house. Irrespective of district and whether special housing is supplied, it is essential to provide ducks with some form of windbreaks which will afford them adequate protection against ground wind. These do not need to be elaborate, but should give effective protection against the prevailing wind. In addition, it is desirable to afford ducks some shade and not expose them continuously to hot midday summer sun. If natural shelter is not available, some simple combination of wind and sun shelter is highly desirable.

In addition to housing for adult birds, a simple type of brooder house is necessary, which will vary according to the system of rearing employed. As the brooding period for ducks is considerably shorter than that for chickens, the capacity of brooder house and brooder equipment necessary is less than that required in chicken raising. No special housing is required during the growing stages, but on a commercial duck farm provision has to be made for an incubator room, food store, and egg room.

BREEDING AND REARING

The selection of breeding ducks from first-year stock is common, particularly if the owner wishes the eggs to hatch early in the season. Early hatching has advantages when ducks are being raised for table birds, but there is much to be said for retaining successful breeders for several seasons, and in general ducks have a longer breeding life than the average for poultry. In normal times overseas some flocks of first-year ducks are trap nested and the breeding stock selected from these birds, judged on their first-year egg production.

Birds having wide, long, and deep bodies are desirable as breeding ducks for egg production. Coarse-headed birds, male or female, should not be used, as heavily-producing ducks invariably have fine heads, and when in lay have well-developed, deep bodies. Every endeavour should be made to select only ducks and drakes which weigh not less than the minima stipulated under the New Zealand Poultry Flock Improvement Plan. Breeding pens should be made up not later than August or September, as the hatching season is in full swing in October.

How Long Should The Moult Last?

At most the moult should last for from 4 to 6 weeks, and if this period is prolonged and the birds do not quickly recover clean brilliant plumage with brightness of eye and scarlet comb, then the poultry farmer should look for the cause in the general health and condition of the birds and that in turn reflects on the FEEDING.

The problem of QUALITY in the feed today is a colossal one for every poultry farmer. It is acknowledged that the Standard Mash is inadequate. The increased price for eggs to producers will not help the poultry position unless a high standard of productivity is maintained throughout a long laying season. It is for this reason that many producers are adding Laymor Tonic regularly to the Standard Mash. Laymor Tonic supplies just those essential properties that are essential, together with vitamin and mineral content to maintain the highest standard of general health and full productivity. Laymor Tonic is today an essential addition to the daily diet.

Two types of matings may be made, by single-drake pens or mass-mated pens. In single-drake pens rather fewer ducks should be allowed to each drake. With the egg-laying breeds such as Khaki Campbells and Runners eight to ten females may be mated to one male, but with the heavier breeds such as the Pekin duck the number should be lower—say five to eight females to one male.

Though mass mating of ducks is common, the best results are usually obtained with single-drake matings.

Satisfactory results can be obtained with breeding pens which do not have access to water for swimming on, but some experienced duck breeders believe that better results are obtained from ducks which are given the natural conditions of water during the breeding season.

EGGS FOR HATCHING

Eggs for hatching should be collected daily as soon as the ducks are released and should be washed as soon as possible. It is not recommended that duck eggs required for hatching be subjected to a long soaking in water before being cleaned. Providing all mud or droppings are removed, it is not essential for hatching eggs to be cleaned to the extent desirable when they are to be marketed.

Little or no deterioration in hatching results is experienced with poultry eggs kept for 10 days if they are stored under satisfactory conditions and turned regularly, but it is desirable to set duck eggs for hatching as soon after they are laid as is practicable. Much will depend on how long is required to collect sufficient eggs to fill a flat-top incubator or give a setting for a cabinet machine, but it is recommended that duck eggs should not be held longer than seven days, and there is some evidence to show that eggs held for even that period hatch better under hens than in an incubator.

A cool place should be selected for storing eggs for hatching, and if they are kept for seven days or longer they should be turned daily. Turning daily is less important if the eggs are stored on their ends, small ends downward. Care should be taken to reject cracked or rough-shelled eggs. A good medium sized egg is desirable, undersized and abnormally-sized eggs being better avoided.

INCUBATION

As with poultry eggs, duck eggs may be hatched by natural or artificial methods. Hens are employed for natural hatching and heavy-breed birds will cover 10 or 11 eggs. Putting too many duck eggs under a hen is not wise, particularly if she is to complete the operation of hatching. As the incubation period for duck eggs is 28 days (35 days for Muscovy ducks) the hens used should be fully broody, in good condition at the start, and free from vermin. Such birds may be freed of vermin by the use of nicotine sulphate, pyrethrum powder, or sodium fluoride.

An important aspect of hatching duck eggs is that they require more moisture than is necessary for hen eggs. Accordingly the hatching coop or box used for hens sitting on duck eggs should not have a wooden bottom and should be placed directly on moist or damp ground. This natural moisture is of great assistance in duck egg hatching. The floor of the coop may be made of a fine-mesh wire netting to protect the hen and eggs against rats or other vermin. The nest itself should be made of a layer of straw or hay placed on the netting. In dry districts it is often desirable to moisten the ground around the coop with water a few days before the eggs are due to hatch.

All broody hens should be taken off the nest daily for about 20 minutes after the first two or three days. During this period the hen relieves herself, feeds, and drinks. Grain feeding, particularly with maize, is satisfactory for broody hens. The eggs should be checked over seven to ten days after being set and all infertiles removed. Careful observation is necessary throughout the hatching period to detect eggs in which the germs have died and the contents are going bad. Bad eggs are not uncommon among duck eggs during hatching, and should they burst, all the other eggs may be badly soiled and the broody hen may desert the nest.

INCUBATOR METHODS

The hatching of duck eggs in an incubator — either flat-top machines or cabinet incubators—is common today, but it is perhaps true that an incubator eminently suitable for hatching duck eggs has yet to be made. The best method of operating an incubator for hatching duck eggs varies to some extent with the type of incubator, and experience with the machine will have to be acquired before the best results are obtained. For that reason some marked divergences of opinion exist among those who have had experience of hatching duck eggs. However, the following points may act as a guide:—

Flat-top machines are usually run at 103 deg. F., with a rise of up to one degree at hatching time. Duck eggs should not be heated up too quickly and the doors may be left slightly ajar during the first six hours. No harm is done if 12 hours elapse after setting before the temperature reaches 101 degrees, and a further two or three days before the limit of 103 degrees is reached. The first 10 days are the critical ones, during which the eggs should be disturbed as little as possible—in fact, it is customary in the United States not to turn the eggs at all until the first test is made at the end of a week, and that method is also adopted by some duck farmers in New Zealand. Duck eggs may be tested for fertility seven to ten days after setting. A daily watch must be kept for eggs going bad; they may be detected readily by smell in the early days of going rotten.

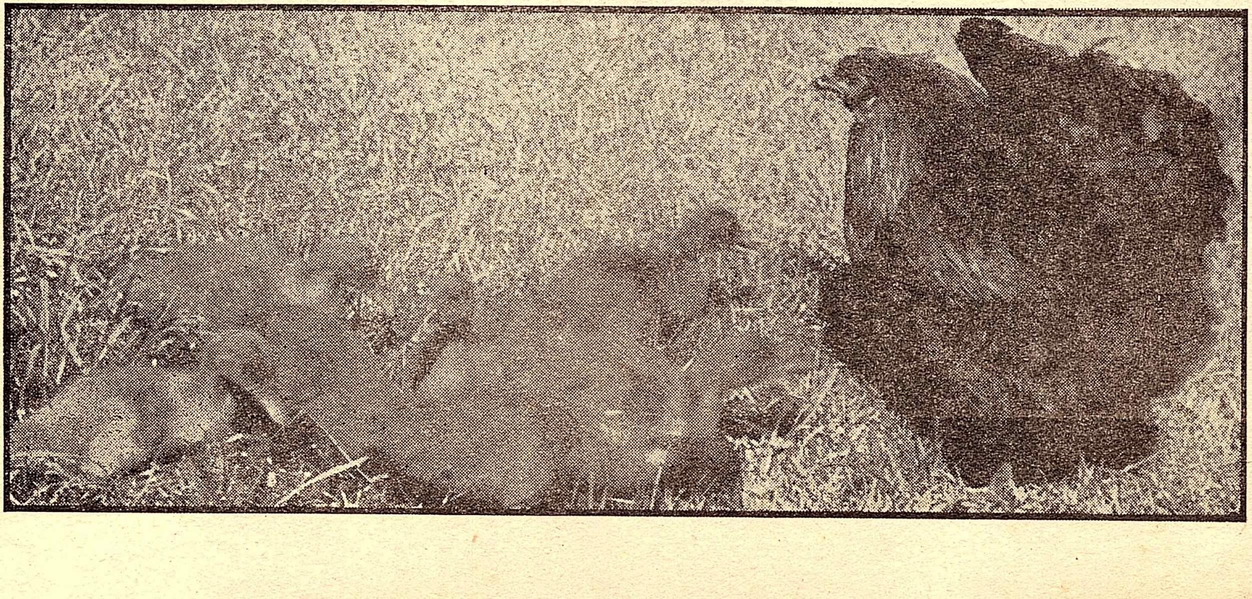
Opinions vary on the question of cooling duck eggs, but it is suggested that cooling after the first week has advantages for eggs hatched in flat-top machines. Apart from any direct effect that the cooling may have on the embryos, this practice undoubtedly helps in the efficient ventilation of flat-top machines and affords the eggs an increased supply of oxygen. These remarks do not apply to eggs hatched in cabinet machines.

Experiments before the war indicated that a high humidity—say 70 per cent.—is desirable for duck eggs in an incubator during the first week, with a subsequent reduction of about 5 per cent. a week until hatching time, when the maximum moisture is required.

Similar treatment for duck eggs is required in a cabinet machine, except that the temperature is maintained at 100 degrees F. Special trays are required to pack duck eggs because of their greater size than hen eggs.

REARING DUCKLINGS

Given reasonable care, ducklings are easier to rear than chickens. They require a shorter brooding period during which warmth is



necessary and are far less liable to disease. Against that must be set the increased difficulties of keeping conditions clean with ordinary brooding equipment. The usual types of litter such as straw, chaff, and rice husks rapidly become damp, soiled with droppings, and trampled into a messy condition.

If only a limited number of ducklings is to be reared, natural methods can be employed with excellent results. Some form of coop is required for the hen and ducklings for the first few days, and for protection at night throughout the brooding period where rats are likely to cause trouble. Rats and weasels are particularly deadly to young ducklings and protection against these menaces must be provided. If there is a hedge, shrubs, or some other protection to which the hen may take her ducklings during the day to avoid rain, hot sun, or cold wind, such protection as coops during the day is unnecessary. After two or three weeks the ducklings may be taken away from the hen and kept in a pen having a simple open-fronted shelter for protection at night and when necessary during the day. A heavy-breed hen will brood 15 ducklings comfortably.

Ducks may be reared artificially using almost any of the ordinary types of brooders. It is now becoming common to rear ducklings in battery brooders, where they are maintained for two to three weeks. Battery brooders are favoured for their wire floors, which enable conditions to be kept cleaner and more hygienic than with floor brooding. When the floor brooding method is selected it is desirable to make wire frames for under the hovers to overcome the dirty conditions that ducklings create.

Ducklings should be started at a temperature of 90 degrees F. under the brooders, as with chickens, but the temperature may be dropped more quickly. In warm climates artificial heat may be dispensed with after about a fortnight. Ducklings may be allowed only a very limited range from the hover during the first two or three days; brooder surrounds of wood or metal should be used to confine them to this space. As ducklings produce liquid droppings and grow very rapidly, efficient ventilation in the brooder house or shed and under the canopy of the brooder is essential.

Ducklings may be allowed outside the brooder house pen after two or three days. If grass runs are provided, the grass should be kept short. Wet long grass is not suitable for young ducklings, as such conditions lead to chills. A modern method of running them is to provide a shallow cage outside the brooder house pen raised off the ground and having a fine-mesh wire netting bottom or slatted wooden floor. The ducklings go out into the extensions or cages for food and water and benefit from direct sunshine. With this type of floor the cages remain reasonably clean during the short brooding period.

PLENTY OF WATER REQUIRED

The feeding of ducks and ducklings will be described in detail in a later article, but it may be emphasized that ducklings require plenty of fresh drinking water to be constantly available. It is a generally-accepted practice to ensure that the depth of the drinking water is sufficient to permit the ducklings to immerse their heads completely, ensuring that the beaks and nostrils are kept clear of food accumulations and the eyes of sores. The writer was surprised on one occasion recently to see young ducklings provided with a drip-feed drinker and to note no trouble from dirty beaks or sore eyes.

Any simple system of penning on grass attached to a low, open-fronted shelter will suffice for the growing period. It is important to note that ducks are inclined to be nervous and are easily frightened, particularly by dogs, cats, or rats. For that reason it is desirable to run growing ducks in comparatively small units—30 to 40 birds. Less damage is then done if the birds are frightened, as in big flocks ducks are likely to pile up on one another if frightened, causing damage. This point has to be watched when catching ducks in a pen.

—Reprint from "N.Z. Journal of Agriculture."

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Mr. A. J. Severn announces that he has acceded to numerous requests and will be a definite candidate at the forthcoming Poultry Board election to be conducted in the Wellington Provincial area.

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Tenders close with Board's Secretary, (Postal Address, Lambton Quay P.O., Wellington) to whom they should be addressed in envelopes marked "Tender No. 1882 for Canopy Brooders," by noon on Tuesday, 30th March, 1948.

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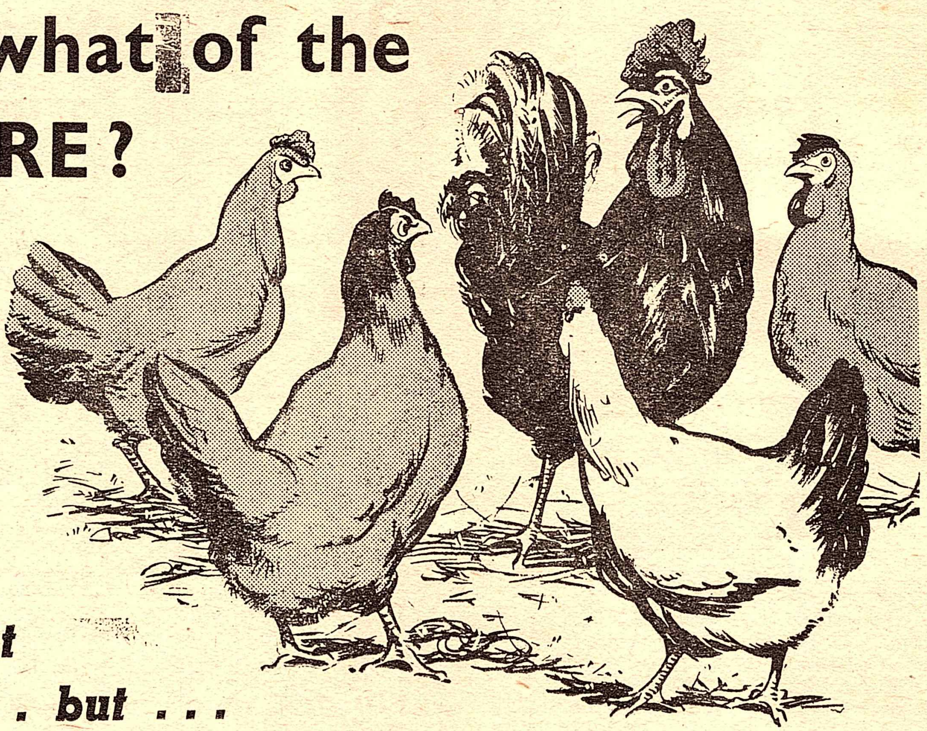

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The Problem of Early Maturity

AN INHERITED FACTOR ASSOCIATED WITH EARLY HATCHING

The question of early maturity, which is associated with early hatching, has assumed considerable economic importance since early hatching has become the rule on the majority of commercial plants. At the present time there are on farms all over the country pullets which are rapidly approaching sexual maturity, and the treatment these receive during the next few months will largely determine their usefulness. Before discussing actual management it is advisable to consider what most poultry-keepers regard as the principal disadvantages of early hatching, namely, rapid maturity, small eggs, and the tendency of the pullets to moult in the autumn when egg prices reach their peak.

RATE OF MATURITY INHERITED

That rate of maturity is an inherited character is now generally recognised, as also is the fact that it is influenced by date of hatching. Early maturity is definitely associated with high production and this is so well-known that for years the date of first egg as a factor in selection has received considerably more attention than should have been attached to it.

EGG SIZE AND BODY SIZE

Unfortunately, when the ovary becomes active before the fowl is physically mature, food that should go to nourish the body and build up frame is diverted from it for the formation of eggs; consequently growth practically ceases and we get small fowls. The capacity to assimilate food is limited by body size, assuming, of course, a condition of good health. It follows, therefore, that a small fowl must lay fewer eggs than a large one, or if she lays more, then egg size must be smaller. In modern "bred-to-lay" strains the latter usually applies. The early maturing pullet which commences production long before it is physically mature produces more but smaller eggs than her slower-mating sister. Generally speaking, this is correct, although there are exceptions.

EFFECT ON STAMINA

Apart from the question of egg size and body size there is a further very important factor to be considered, namely, the effect of early maturity on stamina, more particularly the cumulative effect of continuously breeding from precocious individuals. So great is the urge to lay in highly prolific strains that a pullet may draw upon her bodily reserves to maintain production because her digestive organs are incapable of supplying the ovary, etc., with sufficient nourishment. The inevitable result of breeding from these fowls is loss of stamina, which means, of course, that all kinds of complications will follow, including low resistance against disease. There is no effective method of guarding again these difficulties and dangers other than by careful selection of the breeding stock.

ENVIRONMENT AND FEEDING

Fundamentally it is a breeders' problem, but after the chick has been hatched there are environmental factors, including the feeding, which affect rate of maturity and all that it implies.

As I have said, the conditions under which chicks are normally reared in winter and early spring are favourable to early maturity and very little can be done to counteract their effect. The shorter days necessitate longer hours of rest, there is less opportunity for exercise, more particularly when the youngsters are closely confined to small houses during inclement weather, and as a result they tend to develop their bodies instead of their muscles. It should be remembered that chicks, in common with all youngsters, grow while they are sleeping, and I believe that the influence of rest on rate of growth is considerably greater than many of us imagine. I do not think it can be dissociated from the comparatively slow development of the late-hatched chick. That close

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confinement is conducive to early maturity is well illustrated in the battery brooder, where the chicks have little to do but eat and sleep, and where exercise is limited. The result is earlier maturity with comparatively poor muscular development.

Turning to the question of feeding, we shall understand that if normal growth is to be maintained, the composition of the ration cannot affect the inherited factor—rate of maturity—for it is impossible to change this character other than by selective breeding. It is possible to feed a ration so unbalanced that maturity will be delayed, but this cannot be described as normal growth, and no one desires the abnormal.

If pullets have inherited the factor for early maturity, nothing short of starvation of one or more essential nutrients will prevent their coming into production. We cannot hold them back by omitting protein from the ration unless by so doing we ensure actual deficiency, which results in arrested development. To associate rate of maturity with protein alone is manifestly absurd, for it stands to reason that if the ration is deficient in mineral matter, vitamins, or other essential factor, growth will be arrested. At the same time it should be remembered that foods differ in their effect on the development of young stock, and that those which tend to stimulate, e.g., maizemeal and the protein concentrates, should be used in moderation, the ration being so constituted that steady growth of body and frame is assured, in so far as it may be assured by the feeding.

A moment's reflection will be sufficient to convince everyone that an attempt to retard maturity by restricting food consumption is futile; it will indeed only aggravate the trouble we wish to avoid, namely, small fowls laying small eggs. Rather than keep matured pullets short of food, they should have all they will consume to meet the strain which early maturity places on the body. Lack of adequate rations at this stage will do irreparable harm and may well predispose the stock to disease. It will certainly encourage early moulting, because the pullets will not be in the best possible condition at the time they commence laying.

What May Be Expected

Though there is a definite tendency for early pullets to lay a number of small eggs, if they are well-reared pullets of a large-egg strain size will improve in due course and no anxiety need be felt regarding them. These small eggs are, indeed, rather an advantage, since they do not throw so great a strain on the organs and thus prepare the way for the larger eggs that will follow. Provided a pullet produces a 2oz. egg within, say, two months from the date of the first, it may be considered satisfactory. Frequently pullets will lay a clutch of small eggs, take a short rest and commence with eggs of 2oz. or thereabouts.

One of the greatest mistakes in the management of early-hatched pullets is to give unsuitable rations and generally neglect them during the summer because their eggs are of low value. The man who does this will probably have all the trouble he deserves. He is unlikely to have profitable production.—L. Robinson, in "Eggs."

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"Female Hormones" Fatten Poultry

AN INTERESTING PROCESS

The use of "female hormones" for fattening poultry is discussed by Jaap and Thompson, Oklahoma Agricultural Experimental Station, in an article in a recent issue of "The U.S. Egg and Poultry Magazine" from which the following excerpts are taken.

As early as 1916 it was known that the laying hen has more fat in her blood than the non-layer or the rooster.

It has been proven that the rise in blood fat as well as fat storage in the body is due to the female hormones, estrogens.

Research workers have recently demonstrated that injection of estrogen causes the blood-fat to rise rapidly and fat to be stored in the body. This is true for any age or sex of bird. The question arose to determine whether this could be used to fatten chickens on a commercial scale.

As is true for any new discovery, a great many obstacles must be overcome before it is commercially feasible. The first problem was a source of the estrogen. The old process of extracting it from the glands gathered at packing houses was too costly. During 1937 British scientists synthesized in the laboratory a new compound which was a very strong estrogen. Its name is diethylstilbestrol and it can be manufactured rather cheaply.

Another handicap was the fact that the estrogens had to be injected into the body by the needle as often as once a day. About this same time, 1937, British scientists found that small hard pellets of the chemical produced a continuous effect when placed under the skin of the animal. This method has been used recently by the California Agricultural Experiment Station.

Small pellets of diethylstilbestrol placed under the skin of the neck produced phenomenal fattening of chickens and turkeys by four to five weeks after treatment.

Some "daughter" compounds were then tried for their effects when fed. One of these, which we shall designate as dianisylhexene, was observed to have possibilities as an addition to the fattening feed. The chemical compound was not only "stronger" in its effect, but could be manufactured at a much lower cost than its "mother" compound.

Many other chemicals are being tested for the possible use in fattening. For example, a "sister" comopund of dianisylhexene, dianisylhexane, has proven somewhat stronger in unpublished tests at the Oklahoma Station.

These chemicals such as dianisylhexene and dianisylhexane are not available for commercial use. As a result of present research it is hoped that they may be made available in the near future for general use in poultry fattening.

BEFORE KILLING

Dianisylhexene appears to be most useful for fattening broilers during the last two or three weeks before they are killed. This short feeding period produced the maximum effects using the least amount of hormone. This period is shorter than that reported or pellet implants but very little advantage is attained by a longer feeding period. In most cases two weeks appears to be about the shortest desirable fattening period.

Finishing Broilers.—The finish that results from such a short fattening period as two weeks is very striking. The appearance of the dressed broilers may be described as that fatness of prime capons with only a moderate amount of fat inside the body cavity.

The hormone appears to stimulate the appetite and more feed is consumed during the fattening period. This increased feed consumption is not great. It is just sufficient to allow the chicken to grow rapidly while it is also depositing fat in its body.

One of the effects of the dianisylhexene feeding is to suppress all cockiness, but although chickens fed estrogen become capon-like, estrogen feeding is not a method of caponizing. As soon as feeding dianisylhexene is discontinued the maleness begins to return and the fatness decreases.

SHORT PERIOD

Feeding for a long period would be much too costly. The best procedure is to allow the chicken to grow normally without the burden of being fat and then fatten it two or three weeks immediately before it is to be killed. Rapid fattening is much more economical than the slow fattening which characterised the outmoded capon.

How Hormone is Fed—Estrogen feeding is just as simple as feeding vitamin A and D. The hormone is readily dissolved in feeding oils of all kinds. About 40 to 50 milligrams of dianisylhexene per pound of feed appears to be the most suitable concentration in the feed. When this is added as an oil solution at the rate of one pound of oil solution per hundred pounds of feed a uniform mix is obtained.

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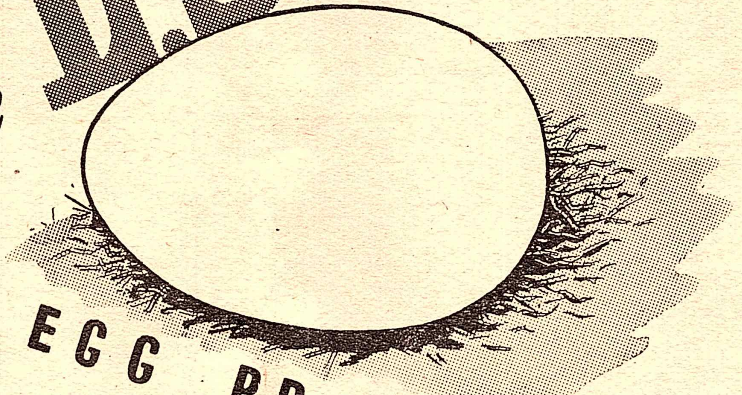

These days, most poultry farmers are wise to the **real** cost of egg production. They know that in the long run two factors outweigh all others--first the number of eggs per fowl per annum **in relation to the cost of the feed**—second the health and **continued** production of the flock.

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Europe's Egg Markets

By JAMES M. GWIN, University of Maryland

The wholesale egg markets of Europe reflect the old-world customs, but they also show many characteristics of our present-day markets in the U.S.A. Wholesale egg markets have a distinctive atmosphere that is found in the European market centres as well as in our own. They are characterized on both continents by the ever-present market sounds, the traffic congestions, the intermittently blocked sidewalks, and even the familiar egg market smell.

Dotted among the European wholesale houses are numerous coffee shops, restaurants and bars which serve the trade in a leisurely way. Trinket salesman and charity solicitors abound in great numbers, and there are always beggars asking for a threepenny bit, a franc, or a lira with which to purchase a cup of ersatz coffee, some cognac or wine. Yes, life in Europe's leading wholesale egg markets is much the same as in ours, except for some ways of doing business and, especially, the speed at which it is done.

The prevailing slow and easy manner in which most of the European wholesale markets operate is a characteristic that never fails to impress an American market man. This leisurely way of doing business undoubtedly has some advantages, but it also has the definite disadvantage of forcing both buyers and sellers to spend many extra hours in the market, and it yields a relatively small volume of business per individual firm.

The wholesale egg markets of Europe are still operating under wartime conditions. Market men are still food distributors, but their function as food merchandisers has virtually ceased. In its place they have the task of helping government agencies with food allocation operations. However, in general, they continue to carry on much the same as they did before Europe became embroiled in war.

The London and Copenhagen methods of wholesale trading are more akin to those of American markets than are the methods of other European markets. They have better standardization in packaging and make some effort to grade eggs for size and colour. Their ways of doing business are somewhat like our own, although they both benefit and suffer from the effects of doing business slowly.

The London wholesale egg market is characterized mainly by dignity, politeness, and the complete absence of high pressure sales methods. When product is avaliable, the buyer may examine it at his leisure and make his selection unhampered by sales pressure. Representatives of the wholesale firms stand by ready to serve, but they do not offer their services until the buyer indicates he is in need of sales assistance. It is reported that this policy is followed consistently on the London wholesale market when product is plentiful as well as when it is in short supply.

The Copenhagen wholesale market has a pronounced tone of seriousness. Buyers and sellers reflect a super-earnestness of purpose—an attitude that is reflected throughout the market. Those who do the most menial labour move about in a deliberate manner; and when there is no work, they sit quietly by, apparently never bantering or joking with one another as they do in French and American markets.

The eggs in the Danish markets are comparatively well-graded. Most of them are packed in standard 30-dozen cases in which one-piece filler-flat material is used. There are many more commercial firms operating in Denmark than one expects to find in this land where co-operatives are considered the dominant sales medium.

During the war years, the Danish co-operative egg marketing organizations operated under Nazi domination. They were then forced to act as crop collecting agents and as suppliers of detailed statistical information concerning agricultural collections and production. However, they are still intact and from all indications are gradually resuming their former peacetime operations.

War conditions made it impossible for the co-operatives to perform one of their most important services to their members—that of handling the details in connection with the exporting of eggs to neighbouring countries. Danish flocks were seriously depleted by the war, but in general, they are in much better condition than any other country in Europe. Denmark is probably the only allied country in Western Europe that is now in position to start large scale egg exporting operations. From all indications, the bulk of their egg export operations probably will be handled by the co-operatives, as they are undoubtedly a very important part of the economy of the country. However, the commercial firms are also important—more so than many of us have realized—and they handle a fair share of the total Danish egg deal.

The wholesale egg market of Rome is small, poorly organized, and not a particularly pleasant place to visit. It is partially combined with the wholesale meat business and is spread over a wide area of the city. The area is one that has particularly narrow streets, dotted with numerous firms that usually handle eggs as a sideline. Little or no attempt is made to package the product uniformly.

Under Italy's compulsory crop collection and price system, there is virtually no merchandising problem. It is merely a matter of handling the product. From all indications, this is done with the least possible effort on the part of the dealers. The Italian egg markets probably have the lowest quality average of any of the major markets of Europe. The eggs are handled mainly in heavy baskets, each containing from 50 to 200 eggs. The eggs are placed loosely in these containers when being distributed locally, and packed in straw when they are transported long distances. There was no evidence of any attempt whatsoever to grade, refrigerate, or even protect these eggs from the sun.

Black marketing in locally-produced products was not, as a rule, as bad as one would expect under the existing food shortage conditions. This was due to the rigid control of the crop collection systems and to the fact that countries like Italy have operated under a deficit food economy for a long time. However, even in Italy and parts of Southern France, their food collection and distribution system has collapsed badly, resulting in a flourishing black market for eggs and a number of other food items. Under these conditions, it was difficult to make a fair appraisal of Italy's marketing system. However, it is not unfair to say that, at best, they operate under very antiquated conditions.

The Paris wholesale egg market is the most interesting of all. War made practically no change in its operations except to reduce its volume. The French method of merchandising shell eggs is comparable to methods used in the United States 50 or more years ago.

Interior quality is given practically no consideration. Packaging is not standardized, with variation in egg case size ranging from 60 to 240 dozens. Strict government control operates throughout the market with separate inspectors for every phase of the work.

The care-free attitude of Paris is reflected in the egg market operations. Buyers are not free to move hurriedly from firm to firm, but must spend many extra hours a day "socializing" with the various people from whom they buy. Technological progress is exceptionally slow, with most firms operating with the same type of equipment that was used almost a century ago.

The Berlin wholesale egg market is non-existent at present. All food in this city is handled by a food commission operating under the joint direction of military governments of England, France, Russia, and the U.S.A.

The Brussels wholesale egg market suffered a serious decline in volume during the war. Commercial trading was virtually suspended, and the few eggs that appeared on the market were completely controlled by the government's food allocation board.

Prior to the war, the Brussels market had been an important egg trading centre. At that time, Belgium had more than 20,000,000 high-producing hens. In addition to supplying the egg needs of her thickly-populated country, she produced a surplus of around 700,000,000 eggs per year. At the close of the war, the Belgian flocks had been reduced to less than 3,000,000 hens. Under these conditions, there is little need for elaborate egg distributing facilities.

When large quantities of grain are made available for poultry feeding, Belgium undoubtedly will return to her former position as a surplus egg producing nation and the Brussels wholesale egg market again will become an important egg distributing centre.

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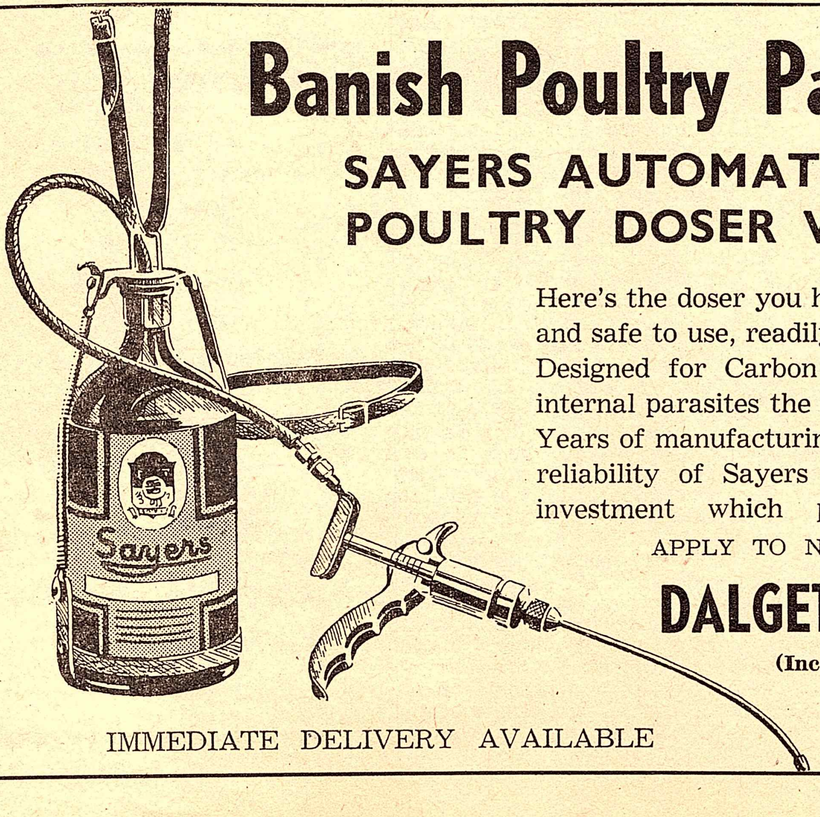

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J. F. Still (2)	3	215
J. F. Still (4)	*4	194
Mrs. A. Lowe (1)	5	255
Mrs. A. Lowe (2)	5	220
Mrs. A. Lowe (3)	3	225
J. S. Dow (1)	0	62
J. S. Dow (2)	*6	162
M. S. Mitchell	5	208
P. H. E. Evans	0	109
T. Weaver	1	120
F. S. Vinnicombe (1)	3	169
Mitchell and McKie	5	218
A. Stewart (2)	5	214
A. Stewart (3)	5	203
B. H. Winchester (1)	3	177
B. H. Winchester (2)	*2	173
B. H. Winchester (4)	*4	190
C. Tritt (1)	0	103
C. Tritt (2)	6	246
C. Tritt (3)	5	215
C. Tritt (4)	5	188
Mrs. J. Hadfield (1)	6	204
Mrs. J. Hadfield (2)	4	241
Mrs. J. Hadfield (3)	*2	212
G. F. Salisbury (1) 1	5	185
G. F. Salisbury (1) 2	3	182
G. F. Salisbury (1) 3	6	198
G. F. Salisbury (2) 1	5	204
G. F. Salisbury (2) 2	*5	188
G. F. Salisbury (2) 3	5	185
V. S. Vinnicombe (2)	B	210
V. S. Vinnicombe (3)	5	206
V. S. Vinnicombe (4)	0	42
V. S. Vinnicombe (5)	2	193
V. S. Vinnicombe (6)	0	182
C. Munnings	5	184
C. J. Murray (1)	6	192
C. J. Murray (2)	B	180
C. J. Murray (5)	5	163
C. J. Murray (6)	*4	210
C. J. Murray (7)	3	195
C. J. Murray (8)	4	150
S. Harrington (1)	B	159
S. Harrington (2)	4	232
S. Harrington (3)	4	230
T. Stevenson	5	235
R. Cook	4	156
S. B. Roberts	4	236
E. P. Anderson (1) 1	5	185
E. P. Anderson (1) 3	0	219
E. P. Anderson (2) 2	6	240
Mrs. E. M. Lucas (1)	7	206
Mrs. E. M. Lucas (2)	4	177
J. Mavor (1)	6	245
J. Mavor (2)	6	254
J. Mavor (3)	2	144
J. Mavor (4)	5	215
Miss Aileen Jakins (1) 1	2	194
Miss Aileen Jakins (1) 2	5	213
Miss Aileen Jakins (1) 3	4	157
Miss Aileen Jakins (2) 1	4	223
Miss Aileen Jakins (2) 2	6	198
L. A. Colee (1) 1	5	221
L. A. Colee (1) 2	0	110
J. B. Lees (1) 1	2	189
J. B. Lees (1) 2	4	190
J. B. Lees (1) 3	5	204
J. B. Lees (2) 1	5	207
J. B. Lees (2) 2	B	218
J. B. Lees (2) 3	5	173

LANGSHANS

C. L. Burt (1)	5	175
C. L. Burt (2)	0	114
C. L. Burt (3)	0	98
Walker and Moody (1)	5	110
Walker and Moody (2)	4	110
H. J. Anderson (1)	4	151
H. J. Anderson (3)	4	149

BLACK ORPINGTONS

E. C. Dudding (1)	*7	214
E. C. Dudding (2)	0	101
E. C. Dudding (3)	6	208
Wm. Maurice (1)	6	181
Wm. Maurice (2)	1	219
F. C. Johnson (1)	3	184

RHODE ISLAND REDS

E. Schache (1)	4	203
E. Schache (2)	5	175
E. Schache (3)	5	234
Watson Bros. (1)	5	239
Watson Bros. (2)	5	252
P. Garrett (1)	6	107
R. M. Povall (1)	0	172
R. M. Povall (2)	4	188
C. G. Clements (1)	4	169
C. G. Clements (2)	*1	246
C. G. Clements (3)	0	204
Mitchell & McKie (3)	0	184
C. D. Anderson (1)	3	192
C. D. Anderson (2)	5	226
C. D. Anderson (3)	6	232
C. D. Anderson (4)	3	140
V. Billington (1)	5	180
V. Billngton (2)	2	157
S. L. Dawson	6	135
S. Harrington	2	161
P. H. E. Evans	*7	212
M. S. Mitchell	6	162

BARRED ROCKS

H. L. Watson (1) 1	*6	243
H. L. Watson (1) 2	*6	238
H. L. Watson (1) 3	2	235
H. L. Watson (2) 1	1	209
H. L. Watson (2) 2	5	223
H. L. Watson (2) 3	*1	191
F. C. Johnson (1)	5	162
F. C. Johnson (2)	6	198
F. C. Johnson (3)	4	189
J. Neilsen (3)	3	178
J. Neilsen (4)	3	196
S. E. King (1)	4	186
S. E. King (2)	4	200
T. King (1)	2	148
T. King (2)	3	237
R. R. Parker (1)	7	203
R. R. Parker (2)	1	157
Avonlea Poultry Farm (1)	3	224
Avonlea Poultry Farm (2)	0	122
Mitchell & McKie (1)	5	155
Mitchell & McKie (2)	5	146
Mrs. A. R. Beck (2)	0	118

ANY OTHER VARIETY

C. Munnings (1) L.S.	4	159
C. Munnings (2) L.S.	0	236
J. R. Griffen L.S.	6	207
C. Munnings (1) B.O.	0	203
C. Munnings (2) B.O.	0	125
E. Vogtherr B.O.	5	174
Mitchell & McKie S.W.	5	124

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Winter Litter

Litter is the material placed upon the floor of a poultry house for these reasons: To prevent floor draughts; to provide a comfortable mat for the birds when walking or jumping up and down; to aid floor dryness; to improve interior lighting by reflection; to clean the feet, so lessening the possibility of soiled eggs; to assist cleaning out, and to provide a means of exercise by scratching.

Quality: To be effective, it must be dry, light, clean, dust-free, and easily moved when the birds scratch.

Reject worthless litter and replace with fresh immediately, as it may chill the birds' feet, lead to an outbreak of colds, lower the temperature of the house, foul the floor beneath, soil the feet, and so dirty the eggs. Litter is useless when it is wet, heavy, foul, dusty, and matted.

Long-lasting litter is assured by ventilating the houses efficiently; keeping out rain; putting in the correct quantity at the start; keeping no more birds in the house than it will properly hold; turning it over loosely every day to assist evaporation, and using a wooden floor raised 10 in. above the soil or an earth floor higher inside by 9 in. than the earth level outside.

Materials available are straw, hay, garden rubbish, peat moss, bracken, leaves, shavings, sawdust, flights, chaff, wood wool.

Straw is excellent, being light in colour, much appreciated by the fowls, attractive for scratching, and soft. Its drawbacks are that it is not very absorbent and readily flattens down. Depth, 6 to 9 in.

Hay: While it is economical to use rough hay from hedgesides, it is a litter which quickly mats down to become heavy and useless. It is better used with another sort to keep it loose. Depth, 4 to 6 in.

Garden Rubbish: This is surprisingly good and may consist of all herbage and tops which are thoroughly dry. The long stiff stems should be removed, as also any wet patches. Take care, too, to discard possible poisonous weeds. Usually many insects are found. It is best used with another "shorter" litter such as dead leaves or shavings, and does well on peat moss. Depth 9 to 12 in., according to texture and length.

Peat Moss: The longest lasting litter because it is so highly absorbent. It is unfortunately dark in colour, and its appearance when worn is apt to lead to its continued use when foul.

Bracken: This is good if cut with a scyth to remove the top 12 in. only. The lower coarse stems are apt to be a nuisance. It must be quite dry, and although the leaves break down rapidly they make a useful "short" litter. It can be best used with a medium material such as shavings. Depth 9 to 12 in.

Dead Leaves: Excellent material if dry and free from mould. The longest lasting are beech, oak, willow and ash; the shortest sycamore, plane, elm, and poplar. Makes a valuable manure when discarded. Depth, 4 in. small leaves, 6 in. large ones.

Shavings: Most acceptable because they are light, easily scratched about, attractive, and have a restrictive effect upon fleas and lice, especially those from pine wood. Goes well with sawdust as a bottom litter. Not very absorbent, but lasts longer because of open texture. Depth, 6 in.

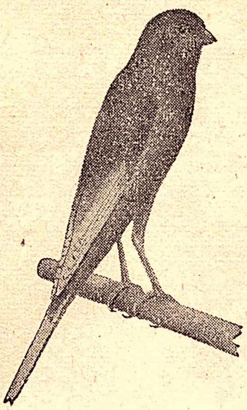
Sawdust: Very useful as an under-litter for longer stuff; light, sweet-smelling and cheap. Birds won't eat it if they are properly fed. Mats down rapidly if used by itself. Depth 2 in.

Flights or Cavings: This is the light residue left after threshing and is of great value, being light and fairly absorbent. Samples heavy with dust should be avoided. Depth, 4 in.

Chaff: This is cut straw and undoubtedly one of the best. It will last long if frequently loosened. Valuable for chicks. Depth, 3 in.

Wood Wool: If cut or rubbed down makes a useful litter, but should not be used in large pieces. Best used in conjunction with another litter such as shavings.

Dual-litter: To increase life it is a fine idea to use two litters together. The longer one serves to prevent clogging and assist evaporation of the liquid part of the droppings, while the shorter one is absorbent, blocks floor draughts and cleans the feet.



CAGE BIRDS

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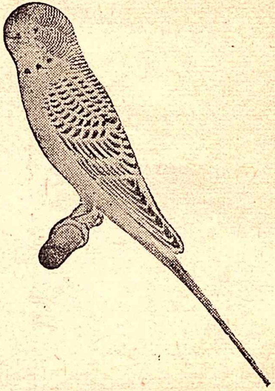

Food for Canary Chicks

By A. P.

Many of you have nests of canaries hatched and are anxiously looking forward to the time when the youngsters can fend for themselves. If the eggs are not already hatched do not interfere with the parents. Many hens resent being continuously turned off the eggs and some are liable to desert them at the last moment.

After the hen has been incubating for about nine days, it is a good plan to examine the eggs and see if they are fertile or not. Each egg should be gently handled between the finger and thumb (taking care to hold each end of the egg only) and hold it up to a strong light. If clear or unfertilized, the yolk will distinctly show as a dark patch surrounded by light, but if fertilized, the egg will be completely dark, and heavy looking. In the former case, it will be found best to take eggs and nest away and separate the birds. After a week or so, the pair may be returned together and a new nest and building material supplied so that they may make a fresh start.

The evening the eggs are due to hatch a very small quantity of crumbled hard boiled yolk of egg should be supplied but on no account overdo the amount.

About as much as will lie on a shilling will prove ample. A tiny pinch of rape seed may also be placed on the plain canary seed in the hopper, but do not give green food or other titbits.

If everything has gone right, faint chirps will be heard from the nest the following morning. Now give the same quantity of egg three times during the day, at breakfast, morning and evening. A thimbleful of rape can also be added to the seed, but do not be too generous. The second day, treat exactly as above, but at midday replace the egg with a little milk sop and add a few whole groats to the canary and rape seed. It is most important to keep all food dishes scrupulously clean all through this period, but if the parents are nervous and disturbed when the cage is cleaned, as they are almost certain to be, leave it alone, at least for the time being. On the third day the egg food may be slightly increased, and if desired a proprietary food introduced. This should be made crumbly moist and mixed with the egg. Both white and yolk can now be used, but be careful not to use too much. Many beginners pile in enough food to feed fifty birds, and after a few days the hen gets heartily sick of the sight of so much food and refuses to look at it, with the result that the youngsters are either fed on hard seeds which are most difficult for them to digest or get nothing with disastrous results.

A successful method is to take away all seed, and feed solely on hard boiled egg and crushed wine biscuit or a proprietary egg food for the first ten days. The only drawback to this is that the parents are continually poking their heads through the holes where the seed hoppers should be. This may be easily overcome by replacing the hopper filled with whole groats or fixing a piece of cardboard over the holes.

Some breeders feed the seed as usual when giving a ration of egg food. Take away all stale food when fresh supplies are given and see that the water jars are kept scrupulously clean. Withhold all green food until the fourth day and then give sparingly chickweed, watercress, and young tender dandelion leaves. For the first seven days the hen will free the nest of any excreta the young pass. After the seventh day the young birds are able to expel the excreta over the edge of the nest; though the nest may get unsightly, it is best to leave it. Only when the interior of the nest becomes fouled, is it necessary to clean it. Most hens will feed their broods for the first few days and then for no apparent reason they sometimes neglect them. If this occurs it is always as well to examine the nestlings each night and any that appear to have empty crops should be fed. This is quite easily done with a small spatula of wood and some hard boiled egg, or ready-made egg food moistened with warm water to a thick creamy paste. Little difficulty will be experienced in making the youngsters open their mouths, the principal difficulty being to fill them fast enough. Some breeders always remove the cock bird from the time the hen commences to sit, but as a rule this is only necessary when the bird is of a mischievous disposition and insists on pulling the nest to pieces or interfering with the hen. Sometimes also, the presence of the cock seems to give the hen a feeling that all she has to do is to brood over the youngsters and only the removal of the mate will force her to realize that she also has to feed them. However, most cock canaries can be depended on as feeders, and they are worth their weight in gold, especially when a large brood has to be catered for. Therefore, I advise beginners to leave the cock bird with the hen for the time of pairing, providing he is only running with the hen.

It is a fairly regular practice with some breeders to remove the old spoiled nest when the youngsters are eleven or twelve days old, and substitute another clean nest. Be sure the new nest resembles the old one as much as possible, otherwise the hen may not accept it and trouble might ensue. Do not interfere any more than is necessary from now on, and be sure you do not worry the youngsters unduly, for should they be frightened from the nest at an early age, say fifteen or sixteen days, it is most difficult to make them return to it. About this time the hen will probably be showing indications of wanting to sit again.

SECOND NESTS

Sometimes a bird will lay in her old nest alongside the youngsters, but it will be much better if you supply her with a new nest. Although the youngsters will not damage the eggs, despite their constant wriggling and squirming, things are not too comfortable even for them when the hen squeezes herself on to the nest. If the cage is a single "breeder" a good plan is to gently place the nest of youngsters on the cage floor immediately below the new nest, and supply the hen with plenty of moss and cow hair for nesting materials. It is better to give more nesting than is required, otherwise the hen may be tempted to pluck the young birds. Should a double breeding cage be used, the old nest and youngsters should be placed in the spare compartment previously separated by the insertion of a wire slide.

The parents will attend to their needs and feed them through the wires while the hen will continue with her new home without interference. When the young brood are nineteen or twenty days old, they begin to leave the nest and in a single "breeder" will soon find their way back to the sitting hen, much to her discomfort. This is when the nursery cage is handy (they are small wire cages) but almost any wire cage will serve the purpose. It should be hooked on endways to the open door of the breeding cage and the youngsters placed in it. The parents will feed them through the wires providing the space allowed between is sufficient. Do not have the wires too wide apart (about three-eighths of an inch is ample) or the young birds may get their heads through, when there is danger of their heads being plucked.

At twenty-one days the young birds should be removed to a separate cage which has been well cleansed for their reception.

Do not fix perches for a day or two, but cover the tray with either blotting paper or newspaper. A flat board with a slightly raised rim should be placed on the cage floor in which a generous supply of milk sop has been distributed. A sprinkle of maw seed on this will often encourage the young birds to take an interest in it. At this stage, they must be closely watched to see that they are eating and any that do not should be returned to their parents for a short while.

They will appear particularly miserable for the first day, but eventually will reluctantly sample the food provided, though they will no doubt continue to cry for their parents.

Feather Picking

A cure for feather picking in parrots is given by Mrs. B. Bull, of Southern Rhodesia, which was successful on her 45-year-old bird who had been almost bare. The treatment was to add two drops of iodine to all drinking water. An early morning shower with soft water and half a pint of water with four drops of iodine to finish also as a shower. At midday half a pint of soft water and four drops of iodine. (This is in the hot weather and only at midday in cold weather) used as a shower. After a course of this treatment the feathers will grow again and the plumage will be beautiful.

Nesting Budgerigars

About this time every year, the beginner is worried what to do with that last chick in the first round. It often persists in sticking in the nest long after the others are fledged, soiling the eggs of the second round. It may even puncture those eggs with its claws.

The best thing to do with such a chick is to remove him from the nest and put him on the floor of the cage. Do not put him on top of the nest box or he will be back in the nest within five minutes. The cock will continue to feed him if he has not already learnt to feed himself. When going the rounds of the nests notice the beaks of the chicks which still linger in the box. If these are yellow and hard it is time those youngsters were out. They have already left the nest, but on hearing you approach, they bolt back out of sheer nervousness. Spend five minutes each day handling those timid ones, returning them to the cage or flight but never to the nest box. This often creates the necessary confidence and solves the problem. Sometimes the beginner at the end of the second round is tempted to let the hen go on and take a third round, all because she has probably laid one or two eggs before the last chick left the nest.

It is never wise to take a third round from good birds, for it either takes too much out of the parents or the youngsters do not thrive as well as one would expect. Parents which have already fed and reared two rounds cannot be expected to feed a third lot with the same loving care that they did the others.

If you cannot resist the desire to get something from those odd eggs, then why not distribute them among other nests where the hens are sitting their first or second rounds, this is a far better plan.

Never make roosts, nests or droppings-boards a fixture. They should be movable so that effective treatment for vermin may be carried out as required.

RACING · PIGEONS

OUR FANCY

The "N.Z. POULTRY WORLD" is the official organ
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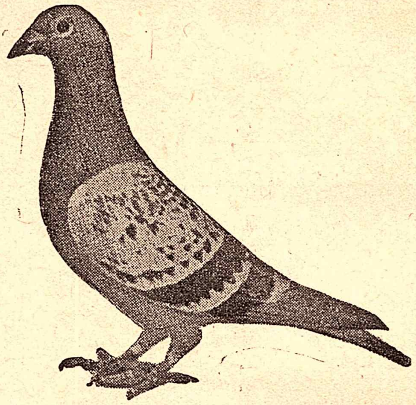

Experiments with Pigeons

(By E. E. BUTTNER)

It is a well-known fact that during the reproductive stage numerous species of animals are able to utilise their food more efficiently than at other times. Sometimes this refers to most of the food elements, sometimes to only one or a few, depending upon how essential they are or how well represented in the diet they may be.

During reproduction the body "strains every nerve" to make the most of a situation, so it would seem. Thus special tests with pigeons have shown that an increase of about 8 per cent. in body weight occurs during the incubation period, even though food consumption is then frequently below normal. Examination of the different body organs has shown that one-third of this increase occurs in the crop glands, associated with the liberation of prolactin, in preparation of the manufacture of crop milk. The remainder of the weight increase occurs in the body generally, except for the skeletal portion.

It is thus probable that the two-thirds going into the body itself, apart from the crop glands, is the result of reduced exercise more than food itself. During incubation the bird sits still, with the result that a great saving in energy is effected, which is, of course, reflected in body weight increases the same as in humans. On the other hand, this shows what a lot of energy a pigeon uses up in exercise, to say nothing of long distance flights. This being so, it is clear that pigeons require lots of food rich in protein, energy producers (starch in this case), minerals and, of course vitamins, especially when breeding and/or racing. If the diet consists only of cereals such as mealies, wheat, kaffir corn, without beans or peas, the birds will get so little good protein that a valuable portion of the total present in the cereal diet has to be wasted because most of it is too inferior in quality to use for breeding purposes. If the protein is too high, as when we feed only or mostly peas and beans, with too little cereals, then there is so much protein left over that part is used for energy production. However, this sort of energy production results in kidney disorders because it is accompanied by abnormal production of tissue waste material which is made faster than the excretory organs can eliminate. Much accumulates in the tissues to cause harm. If we feed a diet in excess that is rich in all, cereals and legumes, then the birds will have enough over for the formation of excess body fat, especially if exercise is insufficient. Excess fat is thus due to too much food rich in cereals and legumes, with insufficient exercise. A diet too low in protein but rich in cereals will also tend to excess bodily fat, as then the body has to manufacture fat in place of pure muscle, to fill out the hollows in the body.

A significant feature of incubation is that no increase occurs in the weight of the bones. This is because bone-forming minerals like lime and phosphorus then go into the production of the pigeon milk and because cereals and legumes do not contain much of these minerals. Starch, which is a protein sparer, does not enter into the composition of pigeon milk seriously; hence during incubation starch forms body fat.

During the feeding of the young, the body weight of the pigeon decreases, as we would expect in the case of such greedy creatures as young pigeons. Young pigeons eat so much that, according to researches, the food consumption, calculated as dry grain, of a 12-days-old bird is about one-fifth of its own body weight. Of course, the exact requirements of food quantity depend much upon the quality of food eaten by the parents. If their diet is rich in protein of high biological value, the young will worry their parents less, as their food, too, goes a longer way. It is on a poor cereal ration that the young have to worry their parents overmuch, as the food they get from their parents is not as rich as it might be, even though the crop has a knack of turning inferior stuff into superior food.

On a pure cereal grain diet the birds suffer from lack of appetite, which is a serious handicap during breeding, as then they either lose too much body weight, including the bones, or their young get insufficient food, or both. The real cause is lack of phosphate in the diet, for phosphorus stimulates appetite. Cereals are deficient in several minerals as well as proteins. The greatest deficiencies are in lime, sodium and phosphorus, as far as minerals are concerned. Legumes unfortunately are no better as regards sodium and lime; but legumes at least are richer in phosphorus and protein, thus a mixture of legumes and cereals is superior to either used separately and alone. The soy bean is the only exception, being rich in all food elements, except sodium. This last mineral should thus be added to the drinking water in the form of table salt.

One of the most important nutrients in the food of animals is protein. By importance I refer to quantity rather than quality, as every food element is really important and normal life is quite impossible even if the smallest element is missing or present only in insufficient amount. But the term protein includes quite a number of substances called amino acids, which unfortunately do not appear in common tables of food analysis. In fact the real quality or biological value of a protein is determined by the kind of amino acids present. Thus protein and protein are very often two very different things from a nutritional point of view. While many proteins are able to maintain life in adult animals, these same proteins are more or less inadequate for normal growth and development in young animals.

This really explains why a mixture of cereal and legume grains suffices for the nutrition of adult pigeons, and why these same birds have to rear their young on specially prepared food like pigeon milk. We find the same thing between the adult and young animal in every species; what is food for the parent animals is no food at all for the young. The difference is not merely to render the food liquid or soft, or more digestible, but to make the food contain everything required for growth. Thus a pigeon may only get a mixture that lacks certain essential growth factors, yet the pigeon milk will contain all the missing factors. The bird sacrifices its own body tissue to make up for the deficiency in its grain mixture. Up to a certain point such sacrifice of parental substance is quite natural, but the more perfect and complete the parent's food is, the less it need sacrifice of its own body, as any sacrifice only tends to weaken resistance towards disease. And where birds have to sacrifice too often and too much, their body eventually puts a stop to this dangerous physiology and the bird then produces a pigeon milk lacking in certain essential elements, either as regards quantity or quality. Then the young begin to suffer as well as the parent. Much of the inexplainable mortality in young pigeons is sometimes explainable by this argument. It is thus always preferable to supply the parent bird with as complete a mixture as possible, even though its capacity to synthesise certain growth factors may be considerable, at least for a time. And where birds are kept in confinement all the time, their food should be all the more complete as then they are unable to help themselves with the missing elements, which often abound in nature.

Thus it is easy to realise that a mixture of grains will always be superior to a single species of grain, for the protein make-up of every type of grain differs, the ones containing what the other lacks, so that the one more or less supplements the other. But, nevertheless, all cereals are so closely related, and all legumes are so closely related with one another, that one type of cereal and one type of legume can only supplement the other type to a limited extent. But differences between one cereal and another are not as great as between a cereal and a legume. This applies not only to the protein make-up but also to the minerals, vitamins and other nutrient elements. Thus, it is always better to mix one cereal grain and one legume grain than to mix one cereal grain with another cereal, or one legume with another legume grain. The greater the difference between each grain in a mixture, the better the food value of the whole will be, quite apart from the fact that legume grains contain more protein than cereals do and so help to raise the protein content of the diet, irrespective of the quality of these proteins. Usually the lower the quality, the greater will be the quantity required, because the parent bird has to waste a considerable portion of the less essential amino acids of the protein in order to extract the more essential but scarcer amino acids from the protein complex. It is much like the case of rats attacking a bag of dairy mixture; they waste more than they eat because they have to empty a whole bag on the floor in order to extract the small per centage of more valuable nutrients they are looking for and so badly in need of.

So much for theory. Now let us see how actual feeding experiments bear this out. Carefully controlled scientific experiments with breeding homers showed that a mixture of maize and beans, or wheat and sweet lupins, or barley and beans, always resulted in considerable gains in the weight of the growing birds. But a diet of beans alone, or sweet lupins alone, or lentils alone, although containing more protein than the previously mixed diets, actually produced weight losses in five young out of six in each group tried. On wheat alone or rye alone, four out of six birds gained weight, while two out of six lost weight in each group, due to the low protein content of cereals as compared with legume grains, irrespective of their protein quality. On oats alone or peas alone all the birds just managed to keep their original weights, neither gaining nor losing. For the oats we can easily understand this when we remember that oats are less digestible on account of their high fibre content. But as for the diet of beans, or lupins, or lentils, used alone, it must be the lack of starchy elements or carbohydrates that caused the weight losses, because young pigeons require large quantities of starchy food for the production of body warmth even though covered by their parents. This is where wheat alone or rye alone scored over the legume grains as a mono-diet. Thus we see that, although birds require large amounts of protein, a balanced diet is better all the same, even though lower in protein, especially if the protein be of good quality. Some authorities even maintain that bean and lentil proteins are of lower biological value than the proteins of wheat or rye, while the reverse is the case from a mere quantitative point of view. Pea protein seems better than bean protein, because peas at least kept up the original weights.

An exception among beans are soybeans, which are famous for their high protein quality and quantity. However, this mostly refers to the pre-heated soybeans, because tests have shown that the raw soybeans are not nearly as valuable in the matter of protein quality. Nevertheless, even the raw soybeans are still superior to any other legume grain.

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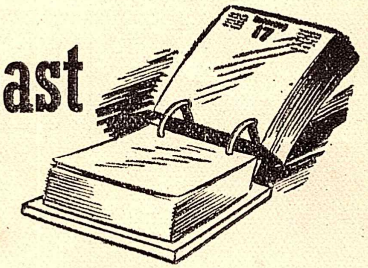

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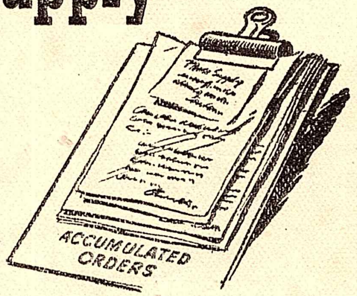

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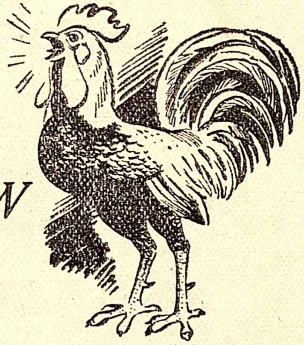

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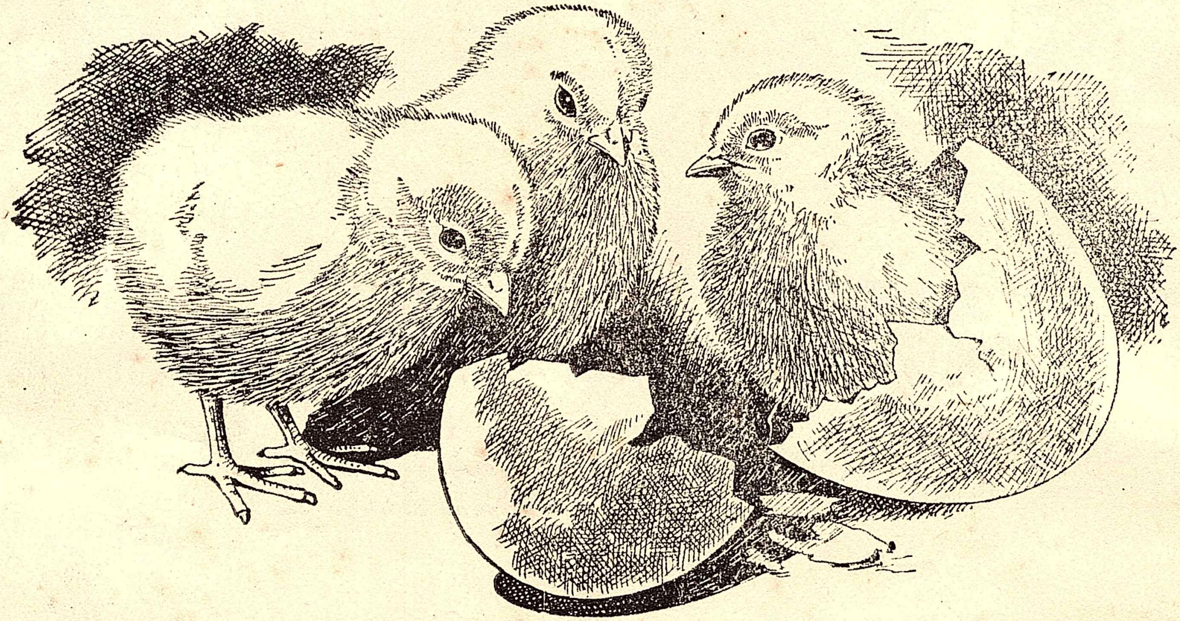

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